

我校最新 EI 工程索引收录学术成果

(以第一著者音序排序)

20130105 新增 9 条

1.

Accession number: 20125215842982

Title: Wentzel-Kramers-Brillouin solution of cut-off frequency for horizontal shear (SH) waves in various inhomogeneous thin films

Authors: Cao, Xiaoshan¹ ; Shi, Junping¹ ; Jin, Feng²/曹小杉;师俊平;金峰

Author affiliation:

1 Department of Engineering Mechanics, School of Civil Engineering and Architecture, Xian University of Technology, China

2 MOE Key Laboratory for Strength and Vibration, Xian Jiaotong University, China

Corresponding author: Cao, X. (caoxsh@yahoo.com.cn)

Source title: Philosophical Magazine Letters

Abbreviated source title: Philos Mag Lett

Volume: 93

Issue: 1

Issue date: January 1, 2013

Publication year: 2013

Pages: 34-41

Language: English

ISSN: 09500839

E-ISSN: 13623036

CODEN: PMLEEG

Document type: Journal article (JA)

Publisher: Taylor and Francis Ltd., 4 Park Square, Milton Park, Abingdon, Oxfordshire, OX14 4RN, United Kingdom

Abstract: The Wentzel-Kramers-Brillouin method is employed to study the cut-off frequencies of the horizontal shear waves in a freestanding functionally graded piezoelectric-piezomagnetic material film with the electrically and magnetically open boundary conditions. An analytical solution, which could be used in analyzing the problems of various functionally graded materials, is proven to have high precision by analytical analysis and a numerical example. The results reveal that the set of cut-off frequencies is a series of approximate arithmetic progressions. A theoretical foundation based on the relationship between the cut-off frequencies and the materials gradient property is established for nondestructive evaluation. © 2013 Taylor & Francis Group, LLC.

Number of references: 15

Main heading: Shear flow

Controlled terms: Beams and girders - Functionally graded materials -

Nondestructive examination - Numerical analysis

Uncontrolled terms: Analytical analysis - Arithmetic progressions - Functionally graded - High precision - Horizontal shear - Inhomogeneous thin films - Non

destructive evaluation - Numerical example - Open boundary condition - Theoretical foundations - Wentzel-Kramers-Brillouin method

Classification code: 408.2 Structural Members and Shapes - 415 Metals, Plastics, Wood and Other Structural Materials - 421 Strength of Building Materials; Mechanical Properties - 921.6 Numerical Methods

DOI: 10.1080/09500839.2012.729958

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130315909831

Title: In situ preparation and mechanical properties of CNTs/MCMBs composites

Authors: Cheng, Youliang^{1, 2}; Li, Tiehu²; Fang, Changqing¹; Liu, Pei¹; Yu, Ruien¹; Hu, Jingbo¹/程有亮;李铁虎;方长青;刘佩;于瑞恩;胡京博

Author affiliation:

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2 School of Materials Science and Engineering, Northwestern Polytechnical University, No. 127 West Youyi Road, Xi'an 710072, Shaanxi, China

Corresponding author: Fang, C. (fcqxaut@163.com)

Source title: Composites Part B: Engineering

Abbreviated source title: Compos Part B: Eng

Volume: 47

Issue date: April 2013

Publication year: 2013

Pages: 290-297

Language: English

ISSN: 13598368

CODEN: CPBEFF

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: By adding carbon nanotubes (CNTs) into medium temperature coal tar pitch, mesocarbon microbeads (MCMBs) were obtained via thermal condensation, then CNTs/MCMBs composites were in situ prepared using compression molding. The morphology, structure and mechanical properties of CNTs/MCMBs composites were characterized by optical microscope, digital camera, scanning electron microscope (SEM) and mechanical test machine. Results showed that CNTs were used as the nucleating agent and could inhibit the growth and coalescence of MCMBs. The optical textures of CNTs/MCMBs composites showed similar characteristics to the thermal condensation products from coal tar pitch with CNTs. The mass ratio of CNTs to coal tar pitch played an important role in the mechanical properties of CNTs/MCMBs composites. The density and bending strength of CNTs/MCMBs composite first increased and then decreased with the increase of the proportion of CNTs. When the proportion of CNTs was 5 wt%, the density of the composite reached the maximum (1.76 g/cm³). In addition, the bending strength of the composite reached the maximum (79.6 MPa) as adding 2 wt% CNTs into coal tar pitch. © 2012 Elsevier Ltd. All rights reserved.

Number of references: 24

Main heading: Mechanical properties

Controlled terms: Bending strength - Carbon carbon composites - Coal tar - Coalescence - Compression molding - Scanning electron microscopy - Surface analysis

Uncontrolled terms: Coal tar pitch - Mass ratio - Mechanical tests - Medium temperature - Mesocarbon microbeads - Nucleating agents - Optical microscopes - Optical texture - Situ preparation - Thermal condensation

Classification code: 816.1 Processing of Plastics and Other Polymers - 801.3 Colloid Chemistry - 741.1 Light/Optics - 951 Materials Science - 423 Non Mechanical Properties and Tests of Building Materials - 415.4 Structural Materials Other Than Metal, Plastics or Wood - 411.2 Coal Tar - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1016/j.compositesb.2012.11.009

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20125215845172

Title: Adaptive particle swarm optimization algorithm and its application

Authors: Feng, Lei1 ; Wei, Wei2/冯磊;魏巍

Author affiliation:

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2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Feng, L.

Source title: Journal of Software Engineering

Abbreviated source title: J. Softw. Eng.

Volume: 6

Issue: 3

Issue date: 2012

Publication year: 2012

Pages: 41-48

Language: English

ISSN: 18194311

E-ISSN: 21520941

Document type: Journal article (JA)

Publisher: Academic Journals Inc., 244, 5th avenue, No. 2218, New City, NY 10001, United States

Abstract: The basic theories of Particle Swarm Optimization (PSO) is introduced and illustrated with flowchart. In this study one of its improved algorithms Adaptive Particle Swarm Optimization (APSO) is introduced. Characteristics of basic PSO algorithms are outlined. Some methods of APSO at present were introduced and analyzed with their parameters. Limitation of these APSO algorithms was analyzed. Pointed out that APSO algorithms can be improved with adjustment of parameters and some other hybrid APSO are referred. Finally, pointed out

application of PSO needs to be extended, hybrid with other algorithms is thought a good way to improve APSO algorithm and applying the improved algorithm to complex problems is the goal of our study. © 2012 Academic Journals Inc.

Number of references: 30

Main heading: Algorithms

Controlled terms: Artificial intelligence - Evolutionary algorithms - Particle swarm optimization (PSO)

Uncontrolled terms: Adaptive particle swarm optimization algorithm - Adaptive particle swarm optimizations - Basic theory - Complex problems - PSO algorithms - Swarm Intelligence

Classification code: 723 Computer Software, Data Handling and Applications - 723.4 Artificial Intelligence - 921 Mathematics

DOI: 10.3923/jse.2012.41.48

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130615986368

Title: Microstructure evolution of Mo-Si-Al system during self-propagation high-temperature synthesis

Authors: Jia, Lei1 ; Xie, Hui1, 2 ; Lu, Zhen-Lin1 ; Zhang, Chao1/贾磊;谢辉;吕振林;张超

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Aeronautical University, Xi'an 710077, China

Corresponding author: Jia, L. (xautjialei@hotmail.com)

Source title: Journal of Alloys and Compounds

Abbreviated source title: J Alloys Compd

Volume: 554

Issue date: March 25, 2013

Publication year: 2013

Pages: 127-131

Language: English

ISSN: 09258388

CODEN: JALCEU

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: The microstructure and phase constitution of Mo(Si_{1-x}Al_x)₂ alloys (x = 0.03, 0.1 and 0.4) prepared by self-propagation high-temperature synthesis is first investigated using SEM, EDS and XRD analysis. Then the lattice parameters and adiabatic temperature are calculated. Based on the above experimental and calculated results, the variation mechanism of diffraction peaks and phase transformation subsequence of the Mo-MoO₃-Si-Al powders is discussed. Results show that, when the self-propagation reaction is over, there are a homogeneous Mo-Si-Al alloy melt and a fused Al₂O₃ with lower density at top. Subsequently, MoSi₂ or Mo(Si, Al)₂ phase nucleates and grows as a primary phase in the Mo-Si-Al alloy melts, and then Al, Si substances

are generated from the intergranular residual Al-Si liquid according to Al-Si binary phase diagram. The Al increase in the starting powder mixtures leads to the Al concentration increase in the Mo-Si-Al alloy melt. Consequently, MoSi₂ is transformed to Mo(Si, Al)₂ to phase in which Si is replaced by Al atoms and Al substance in the intergranular zones increased accordingly. © 2012 Elsevier B.V. All rights reserved.

Number of references: 19

Main heading: Aluminum

Controlled terms: Intermetallics - Microstructure - Molybdenum - Molybdenum oxide - Phase diagrams - Phase transitions - Silicon - Silicon alloys - Synthesis (chemical) - Textures - X ray diffraction

Uncontrolled terms: Adiabatic temperature - Al-concentration - Al-Si liquid - Alloy melt - Binary phase diagrams - Diffraction peaks - Intergranular - Lower density - Microstructure evolutions - Phase constitution - Primary phase - Self-propagation high-temperature synthesis - Selfpropagation - Starting powders - Variation mechanisms - XRD analysis

Classification code: 933.1.1 Crystal Lattice - 933 Solid State Physics - 804 Chemical Products Generally - 802.2 Chemical Reactions - 701 Electricity and Magnetism - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 543.3 Molybdenum and Alloys - 541.1 Aluminum - 531 Metallurgy and Metallography

DOI: 10.1016/j.jallcom.2012.11.124

Database: Compindex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20125215835888

Title: Analysis of the impact of plasma sheath on GPS antenna

Authors: Jiang-Fan, Liu¹ ; Guo-Bin, Wan¹ ; Jin-Sheng, Zhang² ; Xiao-Li, Xi³/刘江凡;万国宾;张金生;席晓莉;

Author affiliation:

1 Northwestern Polytechnical University, Xi'an, 710072, China

2 High-Tech Institute, Xi'an, 710025, China

3 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Jiang-Fan, L. (liujiangfan123@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 229-231

Monograph title: Mechanical and Electrical Technology IV

Issue date: 2012

Publication year: 2012

Pages: 1614-1617

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855102

Document type: Conference article (CA)

Conference name: 4th International Conference on Mechanical and Electrical Technology, ICMET 2012

Conference date: July 24, 2012 - July 26, 2012

Conference location: Kuala Lumpur, Malaysia

Conference code: 94581

Sponsor: Science and Engineering Institute; Universiti Putra Malaysia

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The electromagnetic simulation software CST was used to analyze the effects of reentry plasma sheath on the GPS navigation antenna. The Impedance and radiation characteristics of antenna were studied on condition that the antenna was coated with uniform and nonuniform electron density distribution plasma sheath respectively. The results show that, the antenna coated with the uniform plasma sheath, the plasma electron density increasing, the antenna operating frequency moves to high-frequency and that the directivity decreases as well; when the antenna was coated with nonuniform plasma, with the higher electron peak density of plasma sheath, besides that the operating frequency also moves to high-frequency, the bandwidth stretches wide and the return loss reduces; the antenna radiation pattern distorts seriously at the electron peak density of 10^{18}m^{-3} . © (2012) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Antennas

Controlled terms: Directional patterns (antenna) - Plasma sheaths

Uncontrolled terms: Directivity - Electromagnetic simulation - Electron peak - GPS antenna - GPS navigation - High frequency HF - Nonuniform plasma - Operating frequency - Plasma electron density - Radiation characteristics - Return loss

Classification code: 716 Telecommunication; Radar, Radio and Television - 932.3 Plasma Physics

DOI: 10.4028/www.scientific.net/AMM.229-231.1614

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20125215834591

Title: Numeric analysis of size effect on meso concrete random aggregate model

Authors: Liang, Xinyu¹ ; Dang, Faning¹/梁昕宇;党发宁

Author affiliation:

1 College of Civil Engineering and Architecture Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Liang, X. (Key_xinyu@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 226-228

Monograph title: Vibration, Structural Engineering and Measurement II

Issue date: 2012

Publication year: 2012

Pages: 1780-1784
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855072
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Vibration, Structural Engineering and Measurement, ICVSEM 2012
 Conference date: October 19, 2012 - October 21, 2012
 Conference location: Shanghai, China
 Conference code: 94580
 Sponsor: Guangzhou University; Cleveland State University; Xi'an Jiaotong University; Tongji University; The Hong Kong Polytechnic University; et al
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: In order to research that statics properties of concrete cylinder sample are influenced by micro-concrete material heterogeneity, by random aggregate models generated by different random number were established. By fixed aggregate size and constantly changing of the sample size, the concrete numerical model was simulated and Strength change of concrete samples was analyzed. So that strength influence of the aggregate location of the concrete random sample was study. Calculation shows that: the strength of concrete has been little effect by the aggregate random location, the size effect on concrete has been changed regularly, with the size effect ratio coefficient of aggregate and sample gradually increasing, the error square sum of strain was reduced and the brittleness of the samples becomes obvious. © (2012) Trans Tech Publications, Switzerland.
 Number of references: 7
 Main heading: Aggregates
 Controlled terms: Compressive strength - Random number generation - Size determination - Structural design
 Uncontrolled terms: Aggregate size - Concrete cylinders - Concrete samples - Material heterogeneity - Random aggregate model - Random location - Random Numbers - Random sample - Sample sizes - Size effects - Square sum - Strength of concrete
 Classification code: 406 Highway Engineering - 408.1 Structural Design, General - 421 Strength of Building Materials; Mechanical Properties - 922.2 Mathematical Statistics - 943.3 Special Purpose Instruments
 DOI: 10.4028/www.scientific.net/AMM.226-228.1780
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 7.
 Accession number: 20125215843110
 Title: Coupling of level set and meshless method and its application to crack propagation
 Authors: Ma, Wen-Tao^{1, 2}; Shi, Jun-Ping¹; Li, Ning¹/马文涛;师俊平;李宁
 Author affiliation:

1 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

2 School of Mathematics and Computer Science, Ningxia University, Ningxia 750021, China

Corresponding author: Ma, W.-T. (wt-ma2002@163.com)

Source title: Yantu Lixue/Rock and Soil Mechanics

Abbreviated source title: Rock Soil Mech

Volume: 33

Issue: 11

Issue date: November 2012

Publication year: 2012

Pages: 3447-3453

Language: Chinese

ISSN: 10007598

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: A new method which couples the level set method with meshless method to simulate crack growth is presented. The coupling of level set and meshless method can achieve naturally because they all set up based on the discrete nodal data. Two level sets that are orthogonal to one another at the crack tip are used to represent the geometry of crack and the location of crack tip, and to construct the Heaviside step function and the Westergaard enriched function near the crack tip in the element-free Galerkin method (EFGM) discontinuous approximation. New crack tips are defined by the update algorithm of level set easily when the crack is growing. The coupling method does not use the visibility method, the diffraction method or the transparency method. The \sqrt{r} singularity is reproduced very well; and the convergence for elastic problems is improved. The passage of crack has no influence on the nodal domain. Smaller domain is used to calculation, which keeps the band and sparsity of the overall stiffness matrix. In addition, the level set makes the selection of enriched nodes and the establishment of additional function simply; and its update process needs no evolution equations. The numerical results show that the presented method has higher computational accuracy; and the simulated expanding path of crack is coincided with the tested curve. So, the results verify the validity and accuracy of the presented method.

Number of references: 17

Main heading: Numerical methods

Controlled terms: Computational mechanics - Crack propagation - Crack tips - Cracks - Drop breakup - Level measurement - Orthogonal functions - Stiffness matrix

Uncontrolled terms: Computational accuracy - Coupling methods - Diffraction methods - Discontinuous approximation - Elastic problems - Element-free Galerkin method - Evolution equations - Heaviside - Level Set - Level Set method - Mesh-less methods - Nodal domain - Numerical results - Process needs

Classification code: 421 Strength of Building Materials; Mechanical Properties - 921 Mathematics - 921.6 Numerical Methods - 931.2 Physical Properties of Gases, Liquids and Solids - 943.2 Mechanical Variables Measurements

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20125215835374

Title: P2P-oriented manufacturing resource modeling and sharing system for virtual enterprises

Authors: Wang, Xue-Long^{1, 2} ; Zhang, Jing¹/王学龙;张璟

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, China

2 School of Computer Science, Xi'an Shiyou University, China

Corresponding author: Wang, X.-L. (xlwang@xsyu.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 6

Issue: 22

Issue date: 2012

Publication year: 2012

Pages: 666-675

Language: English

ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Aimed at a large number of manufacturing resources sharing demand in virtual enterprises, the existing classification and modeling methods of manufacturing resources are analyzed. A classification method based on the form of resources existence is provided. The graphic and formalism of manufacturing resources are described. Moreover, taking the document resources as an example, a P2P sharing system prototype is realized based on the JXTA. Experiment results show that the P2P overlay has fewer construction cost and better scalability. And the model and the prototype system can solve the issues which are lack of the whole description and practicality of the existing model.

Number of references: 9

Main heading: Peer to peer networks

Controlled terms: Classification (of information) - Manufacture - Models - Virtual corporation

Uncontrolled terms: Classification methods - Construction costs - Manufacturing resource - P2P overlays - Peer to peer - Prototype system - Sharing - Sharing systems - Virtual enterprise

Classification code: 537.1 Heat Treatment Processes - 716.1 Information Theory and Signal Processing - 722 Computer Systems and Equipment - 902.1 Engineering Graphics - 912.2 Management

DOI: 10.4156/jdcta.vol6.issue22.76

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130115869518

Title: Impact of alpine meadow degradation on soil hydraulic properties over the Qinghai-Tibetan Plateau

Authors: Zeng, Chen^{1, 2, 3}; Zhang, Fan^{1, 2}; Wang, Quanjiu^{3, 4}; Chen, Yingying¹; Joswiak, Daniel R.¹/曾晨;;王全九;;

Author affiliation:

1 Key Laboratory of Tibetan Environment Changes and Land Surface Processes, Institutes of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing 10085, China

2 Key Laboratory of Alpine Ecology and Biodiversity, Institutes of Tibetan Plateau Research, Chinese Academy of Sciences, Beijing 10085, China

3 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences, Yangling 712100, China

4 Institute of Water Resources, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zeng, C. (zengchen@itpcas.ac.cn)

Source title: Journal of Hydrology

Abbreviated source title: J. Hydrol.

Volume: 478

Issue date: January 25, 2013

Publication year: 2013

Pages: 148-156

Language: English

ISSN: 00221694

CODEN: JHYDA7

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Alpine meadow soil is an important ecosystem component of the Qinghai-Tibetan Plateau. However, the alpine meadow soil is undergoing serious degradation mainly due to global climate change, overgrazing, human activities and rodents. In this paper, spatial sequencing was chosen over time succession sequencing to study the changes of soil hydraulic properties under different degrees of alpine meadow degradation. Soil saturated hydraulic conductivity (K_s) and Gardner α both at the surface and at 40-50. cm depth were investigated in the field using tension infiltrometers. Soil physical and chemical properties, together with the root index at 0-10. cm and 40-50. cm soil layer depths were also analyzed. Pearson correlations were adopted to study the relationships among the investigated factors and principal component analysis was performed to identify the dominant factor. Results show that with increasing degree of degradation, soil sand content increased while soil K_s and Gardner α as well as soil clay content, soil porosity decreased in the 0-10. cm soil layers, and organic matter and root gravimetric density decreased in both the 0-10. cm and 40-50. cm soil layers. However, soil moisture showed no significant changes with increasing degradation. With decreasing pressure head, soil unsaturated hydraulic conductivity reduced more slowly under degraded conditions than non-degraded conditions. Soil K_s and Gardner α were significantly correlated ($P=0.01$) with bulk density, soil porosity, soil organic matter and root gravimetric density. Among these, soil porosity is the dominant factor explaining about 90% of the variability in total infiltration flow. Under non-degraded conditions, the

infiltration flow principally depended on the presence of macropores. With increasing degree of degradation, soil macropores quickly changed to mesopores or micropores. The proportion of total infiltration flow through macropores and mesopores significantly decreased with the most substantial decrease observed for the macropores in the 0-10. cm soil layer. The substantial decrease of macropores caused a cut in soil moisture and hydraulic conductivity. This study improves the understanding and prediction of alpine meadow soil and ecosystem changes and provides guidelines for improving water flow modeling under the background of global climate change over the Qinghai-Tibetan Plateau and similar regions. © 2012 Elsevier B.V.

Number of references: 57

Main heading: Infiltration

Controlled terms: Biogeochemistry - Biological materials - Chemical properties - Climate change - Degradation - Ecosystems - Hydraulic conductivity - Mammals - Organic compounds - Porosity - Principal component analysis - Soil moisture

Uncontrolled terms: Alpine meadow - AS-soils - Bulk density - Degree of degradation - Dominant factor - Ecosystem components - Flowthrough - Global climate changes - Gravimetric density - Human activities - Hydraulic properties - Macropores - Meso-pores - Micropores - Pearson correlation - Pressure heads - Qinghai-Tibetan plateau - Sand content - Saturated hydraulic conductivity - Soil hydraulic properties - Soil layer - Soil organic matters - Soil physical and chemical properties - Soil Porosity - Soil property - Tension infiltrometers - Unsaturated hydraulic conductivity - Water flows

Classification code: 931.2 Physical Properties of Gases, Liquids and Solids - 922.2

Mathematical Statistics - 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 804.1 Organic Compounds - 802.2 Chemical Reactions - 801.2 Biochemistry - 801 Chemistry - 632.1 Hydraulics - 483.1 Soils and Soil Mechanics - 461.2 Biological Materials and Tissue Engineering - 454.3 Ecology and Ecosystems - 451 Air Pollution - 423 Non Mechanical Properties and Tests of Building Materials

DOI: 10.1016/j.jhydrol.2012.11.058

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130112 新增 6 条

1.

Accession number: 20130115861363

Title: A novel approach to impedance-based fault location for high voltage cables

Authors: Bi, Taihang1 ; Yao, Lixiao2/;姚李孝

Author affiliation:

1 Department of Research and Development, XJ Electric Zhuhai, Nanping Technology Park, 12 Ping North Road 2 Middle, 519060 Zhuhai, Guangdong, China

2 Institute for Water Conservation and Hydroelectric Power, Xi'an University of Technology, 5 South Jinhua Road, 710048 Xi'an, Shaanxi, China

Corresponding author: Bi, T. (bitaihang@gmail.com)

Source title: Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)

Abbreviated source title: Conf Rec IAS Annu Meet

Monograph title: 2012 IEEE Industry Applications Society Annual Meeting, IAS 2012
 Issue date: 2012
 Publication year: 2012
 Article number: 6374110
 Language: English
 ISSN: 01972618
 CODEN: CIASDZ
 ISBN-13: 9781467303309
 Document type: Conference article (CA)
 Conference name: 2012 IEEE Industry Applications Society Annual Meeting, IAS 2012
 Conference date: October 7, 2012 - October 11, 2012
 Conference location: Las Vegas, NV, United states
 Conference code: 94677
 Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States
 Abstract: This paper identifies the monotonic and linear relationship between transition resistance and line impedance. Based on this concept, an algorithm is proposed to calculate the reactance of transition resistance in different points of the transmission line, and search for the fault location as that point where the reactance value is zero. This approach can eliminate the effect of high resistance grounding and avoid some problems caused by the commonly used modified iterative method. From the results of ATP simulation and dynamic model test, it can be seen that the accuracy of fault location using this approach is significantly improved with respect to that of the conventional impedance methods. © 2012 IEEE.
 Number of references: 16
 Main heading: Electric lines
 Controlled terms: Electric fault location - Industrial applications - Transmission line theory
 Uncontrolled terms: Dynamic model test - High resistance grounding - High voltage cable - Impedance method - Line impedance - Linear relationships - Transition resistance
 Classification code: 706.1.1 Electric Power Transmission - 706.2 Electric Power Lines and Equipment - 913 Production Planning and Control; Manufacturing
 DOI: 10.1109/IAS.2012.6374110
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 2.
 Accession number: 20130115861268
 Title: Robust speed control of induction motor drives employing first-order auto-disturbance rejection controllers
 Authors: Li, Jie¹ ; Zhong, Yanru¹/李洁;钟彦儒
 Author affiliation:
 1 School of Automation and Information Engineering, Xi'an University of Technology, No. 5, Jinhua South Road, Xi'an, 710048, China
 Corresponding author: Li, J. (lijie@xaut.edu.cn)

Source title: Conference Record - IAS Annual Meeting (IEEE Industry Applications Society)
Abbreviated source title: Conf Rec IAS Annu Meet
Monograph title: 2012 IEEE Industry Applications Society Annual Meeting, IAS 2012
Issue date: 2012
Publication year: 2012
Article number: 6374013
Language: English
ISSN: 01972618
CODEN: CIASDZ
ISBN-13: 9781467303309
Document type: Conference article (CA)
Conference name: 2012 IEEE Industry Applications Society Annual Meeting, IAS 2012
Conference date: October 7, 2012 - October 11, 2012
Conference location: Las Vegas, NV, United states
Conference code: 94677

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: A novel ADRC control structure which employs only three first-order ADRCs is presented for the speed control of induction motor drives, moreover, compared with the existing ADRC based speed control structures there is no need to estimate the rotor flux. As a result, the runtime of the proposed ADRC control algorithm is shorter than ever and the implementation of it on DSPs is easier than ever. The simulation results show that the proposed control scheme still can overcome the side-effects of internal disturbance and external disturbance, such as the load disturbances, the motor's parameter variations and the modeling error etc. as good as other robust control schemes which employ higher order ADRCs. Furthermore, a TMS320F2812 DSP based prototype using the proposed control scheme was developed. The experimental results show that the robustness of the proposed ADRC system are obviously better than the conventional PI system when various disturbances occur, and the scheme is feasible and effective.

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Number of references: 15

Main heading: Disturbance rejection

Controlled terms: Algorithms - Control equipment - Electric drives - Induction motors - Industrial applications - Robust control - Speed control

Uncontrolled terms: Auto disturbance rejection controllers - Control schemes - Control structure - Conventional PI - DSP-based - External disturbances - First-order - Induction motor drive - Load disturbances - Modeling errors - Robust control scheme - Robust speed control - Rotor fluxes - Runtimes - Side effect - TMS320F2812 - Vector controls

Classification code: 913 Production Planning and Control; Manufacturing - 732.1 Control Equipment - 731.3 Specific Variables Control - 921 Mathematics - 731 Automatic Control Principles and Applications - 705.3.1 AC Motors - 705 Electric Generators and Motors - 723 Computer Software, Data Handling and Applications

DOI: 10.1109/IAS.2012.6374013

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130115864555

Title: Research on a novel modulation technology for high-frequency link inverter

Authors: Li, Jingang^{1, 2} ; Ma, Qingyuan¹ ; Ding, Shaocheng¹/李金刚;马庆媛;

Author affiliation:

1 Xi'an University of Technology, Xi'an, China

2 State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an, China

Corresponding author: Li, J. (lijingang@xaut.edu.cn)

Source title: Proceedings of the 2012 7th IEEE Conference on Industrial Electronics and Applications, ICIEA 2012

Abbreviated source title: Proc. IEEE Conf. Ind. Electron. Appl., ICIEA

Monograph title: Proceedings of the 2012 7th IEEE Conference on Industrial Electronics and Applications, ICIEA 2012

Issue date: 2012

Publication year: 2012

Pages: 624-627

Article number: 6360801

Language: English

ISBN-13: 9781457721175

Document type: Conference article (CA)

Conference name: 2012 7th IEEE Conference on Industrial Electronics and Applications, ICIEA 2012

Conference date: July 18, 2012 - July 20, 2012

Conference location: Singapore, Singapore

Conference code: 94705

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: A novel control method for high-frequency link inverter is given in this paper. The control principal is described in details, and the digital control signal generating method based on DSP is analyzed. The experimental results indicated that the digital control method is simple reliable and general, the output waveform of high-frequency link inverter is sine-wave, and the switches of power circuit can be realized with soft switching. The experimental results proved the control method is feasible. © 2012 IEEE.

Number of references: 4

Main heading: Electric inverters

Controlled terms: Digital control systems - Industrial electronics - Modulation - Soft switching

Uncontrolled terms: Control methods - Digital control - Digital control signals - Double modulation - Generating methods - High-frequency link inverter - Novel modulation - Output waveform - Power circuit - Sine-wave

Classification code: 722.4 Digital Computers and Systems - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716

Telecommunication; Radar, Radio and Television - 715 Electronic Equipment, General Purpose

and Industrial - 714 Electronic Components and Tubes - 704.2 Electric Equipment

DOI: 10.1109/ICIEA.2012.6360801

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130115865326

Title: Research on influence of intertooth space con friction to transmission efficiency under EHL

Authors: Liang, Wenhong¹ ; Liu, Kai¹ ; Liu, Xiaolin¹ ; Cui, Yahui¹/梁文宏;刘凯;;崔亚辉

Author affiliation:

1 Faculty of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, XAUT, Xi'an, China

Corresponding author: Liang, W. (xws-liangwenhong@163.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 605-607

Monograph title: Advanced Designs and Researches for Manufacturing

Issue date: 2013

Publication year: 2013

Pages: 1158-1163

Language: English

ISSN: 10226680

ISBN-13: 9783037855447

Document type: Conference article (CA)

Conference name: 2nd International Conference on Materials and Products Manufacturing Technology, ICMPMT 2012

Conference date: September 22, 2012 - September 23, 2012

Conference location: Guangzhou, China

Conference code: 94736

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Engagement between gear teeth with con friction has been analyzed aim at low speed and heavy transmission mode of spur gear in aerogenerator gearbox. Nonlinear relation between parameters such as con friction, normal pressure, number of teeth, ratio of transmission, and thickness of fluid film has been deduced by using the theory of elasto-hydrodynamic lubrication (EHL) and gear mesh. Numerical calculation of these equations has been made progress by using MATLAB software under the premise of no analytical solution. The efficiency of each point on line of action has been received. And then the influence of con friction in intertooth space to transmission efficiency under EHL has been analyzed. The results can be provided as argument and numerical value reference for optimization of the gearbox lectotype in areogenerator to make the efficiency maximized, and for further research on transmission efficiency of planet gear train. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Elastohydrodynamic lubrication

Controlled terms: Design - Efficiency - Gear teeth - Manufacture - MATLAB
- Research - Spur gears

Uncontrolled terms: Aero-generator - Confriction in intertooth space - EHL -
Elastic fluids - Fluid films - Gear meshes - Gear train - Low speed - Matlab-
software - Nonlinear relations - Normal pressure - Numerical calculation -
Numerical values - Transmission efficiency - Transmission mode

Classification code: 921 Mathematics - 913.4 Manufacturing - 913.1 Production
Engineering - 901.3 Engineering Research - 607.2 Lubrication - 601.2 Machine
Components - 408 Structural Design

DOI: 10.4028/www.scientific.net/AMR.605-607.1158

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20130115865582

Title: The vestibular system modeling in the head and eye movement research

Authors: Wang, Changyuan1 ; Yao, Bing1 ; Bi, Hongzhe2 ; Jia, Hongbo2/王长元;;;

Author affiliation:

1 School of Computer Science, Xi'an University of Technology, Shaanxi, China

2 Air Force Institute of Aviation Medicine, Beijing, China

Corresponding author: Wang, C. (cyw901@163.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 605-607

Monograph title: Advanced Designs and Researches for Manufacturing

Issue date: 2013

Publication year: 2013

Pages: 2434-2437

Language: English

ISSN: 10226680

ISBN-13: 9783037855447

Document type: Conference article (CA)

Conference name: 2nd International Conference on Materials and Products Manufacturing
Technology, ICMPTM 2012

Conference date: September 22, 2012 - September 23, 2012

Conference location: Guangzhou, China

Conference code: 94736

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670,
Germany

Abstract: Head and eye movement is eye movement response to head movements, the eyes
are the signals generated by the vestibular system is movement. The vestibular system is
important to feel the organs and tissues of the body movement, Can be said that the vestibular
system response to head movement, eye movement associated with the vestibule. We can use
eye movements comparing with normal eye movements to detect whether the dizziness, in this
process the modeling of the vestibular system is very important. Paper summarizes the response

of head and eye movement system, vestibular system in the head and eye movement systems vestibular system exercise and Research at home and abroad, raised modeling method of the head and eye movement system when turn the head. © (2013) Trans Tech Publications, Switzerland.

Number of references: 4

Main heading: Eye movements

Controlled terms: Design - Manufacture - Models - Research - Tissue

Uncontrolled terms: Body movements - Head movements - Head rotation - Vestibular system

Classification code: 461.1 Biomedical Engineering - 461.2 Biological Materials and Tissue Engineering - 537.1 Heat Treatment Processes - 901.3 Engineering Research - 902.1 Engineering Graphics

DOI: 10.4028/www.scientific.net/AMR.605-607.2434

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130115865007

Title: The hydraulic characteristics of slope flow

Authors: Zhenzhou, Shen1, 2 ; Wenyi, Yao2 ; Zhanbin, Li1 ; Peiqing, Xiao2 ; Mian, Li2 ; Jishan, Yang2/申震洲;姚文艺;李占斌;;李勉;

Author affiliation:

1 Institute of Water Resources and Hydro-elctric Engineering, Xian University of Technology, Xian, China

2 Yellow River Institute of Hydraulic Research, YRCC, MWR, Zhengzhou, China

Corresponding author: Zhenzhou, S. (shenzz@139.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 601

Monograph title: Management, Manufacturing and Materials Engineering II

Issue date: 2013

Publication year: 2013

Pages: 123-127

Language: English

ISSN: 10226680

ISBN-13: 9783037855423

Document type: Conference article (CA)

Conference name: 2012 2nd International Conference on Management, Manufacturing and Materials Engineering, ICMMM 2012

Conference date: September 21, 2012 - September 23, 2012

Conference location: Beijing, China

Conference code: 94735

Sponsor: Zhengzhou University; Beijing University of Science and Technology; University of Sydney; Bowling Green State University, USA; IAMSET

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670,

Germany

Abstract: Slope hydrology is an important branch of Modern hydrology, it has a great significance to study the runoff and converge mechanism research of the basin. The characteristics study include of runoff velocity and infiltration rate etc al. the runoff velocity is an important physical quantity to describe overland flow hydraulics characterize. This paper study the effect of slope degrees and water drainage amount on the runoff velocity. The result shows: slope degree and water drainage both are the important factors to change the runoff velocity. The average runoff velocity were increased first and then reach steady-state fluctuations between 0.1-1m/s at different drainage amount, the time they got to the steady states was different. The results could provide some technology support to establishment slope erosion model. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Runoff

Controlled terms: Hydrology - Manufacture - Velocity

Uncontrolled terms: Hillslope hydrology - Hydraulic characteristic - Infiltration rate - Mechanism research - Overland flow - Physical quantities - Runoff velocity - Slope - Slope erosion - Slope flow - Slope hydrology - Steady state - Steady-state fluctuation - Technology support - Water drainage

Classification code: 444 Water Resources - 444.1 Surface Water - 471 Marine Science and Oceanography - 537.1 Heat Treatment Processes - 931.1 Mechanics

DOI: 10.4028/www.scientific.net/AMR.601.123

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

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20130119 新增 13 条

1.

Accession number: 20130215886136

Title: Detecting tampered regions in digital images using discrete cosine transform and singular value decomposition

Authors: Kang, Xiaobing¹ ; Lin, Guangfeng¹ ; Chen, Yajun¹ ; Zhang, Erhu¹ ; Duan, Ganglong²/康晓兵;;陈亚军; 张二虎;段刚龙

Author affiliation:

1 Department of Information Science, Xi'an University of Technology, Xi'an Shaanxi, 710048, China

2 Department of Information Management, Xi'an University of Technology, Xi'an Shaanxi, 710048, China

Corresponding author: Kang, X. (kangxb@xaut.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 6

Issue: 23

Issue date: 2012

Publication year: 2012
 Pages: 179-188
 Language: English
 ISSN: 19759339
 E-ISSN: 22339310
 Document type: Journal article (JA)
 Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of
 Abstract: Region duplication is a simple and common form of image tampering used to hide or clone special objects in a single image scene. In this paper, we describe a novel detection method for region duplication forgery that automatically detects and localizes tampered regions in digital images using discrete cosine transform(DCT) and singular value decomposition(SVD). DCT is applied to each block to represent its features resisting typical geometric manipulations. SVD is used for improving the ability on resisting noise and dimensionality reduction. Comparisons with the existing methods by experimental works indicate that the proposed algorithm is more robust against some common postprocessing operations or attacks such as typical geometrical transformations, lossy JPEG compression, additive Gaussian white noise and Gaussian blur filtering. These operations and distortions are currently techniques used to conceal traces of region duplication forgery in digital images.
 Number of references: 18
 Main heading: Singular value decomposition
 Controlled terms: Discrete cosine transforms - Image compression - Image processing
 Uncontrolled terms: Additive Gaussian white noise - Detection methods - Digital image - Dimensionality reduction - Gaussian blur - Geometric manipulation - Geometrical transformation - Image forensics - Image tampering - JPEG compression - Passive detection - Region duplication forgery - Single images - Special objects - Techniques used
 Classification code: 741 Light, Optics and Optical Devices - 921 Mathematics - 921.3 Mathematical Transformations
 DOI: 10.4156/jdcta.vol6.issue23.21
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130215877106
 Title: Controlled deposition, electrical and electrochemical properties of electroless nickel layers on microarc oxidized magnesium substrates
 Authors: Li, Junming1 ; Zhang, Qianwen1 ; Cai, Hui2 ; Wang, Aijuan1 ; Zhang, Jumei2 ; Hua, Xiaohu2/李均明;;蔡辉;王爱娟;张菊梅;
 Author affiliation:
 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
 2 College of Materials Science and Engineering, Xi'an University of Science and Technology, Xi'an 710054, China

Corresponding author: Cai, H. (caihui35806505@163.com)

Source title: Materials Letters

Abbreviated source title: Mater Lett

Volume: 93

Issue date: 2013

Publication year: 2013

Pages: 263-265

Language: English

ISSN: 0167577X

CODEN: MLETDJ

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: We prepared various porous structures on magnesium substrates by microarc oxidation (MAO) pretreatment in different solutions, and then controllably deposited electroless nickel (EN) layers on them under identical plating conditions. The results indicate that the microstructures, electrical and electrochemical properties of EN layers are highly dependent on the porous surface. Thin layer including tiny nickel granule is deposited on NaF-solution-pretreated substrates, but thick layer, consisting of typical nickel nodule, is formed on substrates oxidized in Na₂SiO₃ solution, while excellent electrical conductivity and corrosion resistance are obtained. Whereas, the reticular-structured layers with wormlike nickel as well as high thickness and resistivity are area-selectively deposited on the substrate pretreated in Na₃PO₄ solution. © 2012 Elsevier B.V.

Number of references: 11

Main heading: Substrates

Controlled terms: Corrosion resistance - Deposits - Electric conductivity - Electric properties - Electrochemical properties - Magnesium - Microstructure - Nickel - Sodium

Uncontrolled terms: Controlled deposition - Electrical conductivity - Electroless nickel - Electroless nickel layer - Magnesium substrates - Microarc - Microarc oxidation - Plating conditions - Porous structures - Porous surface - Pre-Treatment - Thick layers - Thin layers

Classification code: 951 Materials Science - 933 Solid State Physics - 801.4.1 Electrochemistry - 801 Chemistry - 701.1 Electricity: Basic Concepts and Phenomena - 617 Turbines and Steam Turbines - 612 Engines - 549.2 Alkaline Earth Metals - 549.1 Alkali Metals - 548.1 Nickel - 539.1 Metals Corrosion - 532 Metallurgical Furnaces - 461 Bioengineering and Biology

DOI: 10.1016/j.matlet.2012.11.112

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130215877088

Title: TEM characterization of Si films grown on 6H-SiC (0001) C-face

Authors: Li, Lianbi^{1, 2}; Chen, Zhiming¹; Xie, Longfei¹; Yang, Chen¹/李连碧;陈治明;谢龙飞;杨陈

Author affiliation:

1 Department of Electronic Engineering, Xi'an University of Technology, Xi'an, China

2 School of Science, Xi'an Polytechnic University, Xi'an, China

Corresponding author: Chen, Z. (chenzm@xaut.edu.cn)

Source title: Materials Letters

Abbreviated source title: Mater Lett

Volume: 93

Issue date: 2013

Publication year: 2013

Pages: 330-332

Language: English

ISSN: 0167577X

CODEN: MLETDJ

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Si films with $\langle 111 \rangle$ preferred orientation have been prepared on 6H-SiC (0001)

C-face by low-pressure chemical vapor deposition. The high-resolution transmission electron microscopy and the selected area electron diffraction results indicate that the Si film has epitaxial connection with the 6H-SiC substrate and the parallel-plane relationship of Si/6H-SiC heterojunction is $(111)\text{Si} // (0001)6\text{H-SiC}$. Misfit dislocation array is clearly observed at the Si/6H-SiC interface, which accommodates the most of lattice mismatch strain and make the lattice coincident at the Si/6H-SiC interface. © 2012 Published by Elsevier B.V.

Number of references: 7

Main heading: Silicon carbide

Controlled terms: Chemical vapor deposition - Electron diffraction - Epitaxial growth - Heterojunctions - Lanthanum compounds - Silicon - Transmission electron microscopy - Vapors

Uncontrolled terms: Preferred orientations - Selected area electron diffraction - Si films - SiC substrates - TEM characterization

Classification code: 932.2 Nuclear Physics - 813.1 Coating Techniques - 813 Coatings and Finishes - 804 Chemical Products Generally - 741.3 Optical Devices and Systems - 714.2 Semiconductor Devices and Integrated Circuits - 712.1.1 Single Element Semiconducting Materials

DOI: 10.1016/j.matlet.2012.11.093

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130215895269

Title: Passivity-based control of double-fed induction generator under unbalanced grid voltage fault

Authors: Liu, Jun1 ; Jiang, Shuo-Dong1/刘军;蒋说东

Author affiliation:

1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an Shaanxi 710048, China

Corresponding author: Liu, J. (liujun0310@sina.com)

Source title: Kongzhi Lilun Yu Yingyong/Control Theory and Applications

Abbreviated source title: Kong Zhi Li Lun Yu Ying Yong

Volume: 29

Issue: 10

Issue date: October 2012

Publication year: 2012

Pages: 1331-1338

Language: Chinese

ISSN: 10008152

CODEN: KLYYEB

Document type: Journal article (JA)

Publisher: South China University of Technology, Guangzhou, 510640, China

Abstract: To inhibit the imbalance current in the stator and the rotor caused by the unbalanced grid voltage, we propose a passivity control strategy for the double-fed induction generator system (DFIG). On the basis of the passivity of the positive and negative sequence models in the positive synchronously rotating frame, a passivity state feedback controller is first designed. Next, a method for calculating expectation values is developed, by which we calculate the command values for the negative sequence components of the stator current and the rotor current based on the unbalanced control objectives. The command values of the positive sequence components of the stator current and the rotor current are calculated on the basis of positive sequence components of the stator voltage and the expectation values of the electromagnetic torque. Thus, a passive controller for DFIG under unbalance grid voltage condition is designed. Simulation results show that the proposed scheme effectively inhibits the imbalance currents in the stator and the rotor, reduces the output torque fluctuation, and enhances the non-interrupt operation ability of DFIG under unbalanced grid voltages.

Number of references: 15

Main heading: Rotors (windings)

Controlled terms: Asynchronous generators - State feedback - Stators

Uncontrolled terms: Control objectives - Double fed induction generator -

Electromagnetic torques - Expectation values - Grid voltage - Negative sequence -

Output torque - Passive controllers - Passivity based control - Passivity control -

Positive-sequence components - Rotating frame - Rotor current - State feedback controller - Stator currents - Stator voltages

Classification code: 704.1 Electric Components - 705.1 Electric Machinery, General - 705.2.1 AC Generators - 731.1 Control Systems

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20130215877001

Title: Single-channel color image encryption based on iterative fractional Fourier

transform and chaos

Authors: Sui, Liansheng¹ ; Gao, Bo¹/隋连升;高波

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Sui, L. (liudua2010@gmail.com)

Source title: Optics and Laser Technology

Abbreviated source title: Opt Laser Technol

Volume: 48

Issue date: 2013

Publication year: 2013

Pages: 117-127

Language: English

ISSN: 00303992

CODEN: OLTCAS

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: A single-channel color image encryption is proposed based on iterative fractional Fourier transform and two-coupled logistic map. Firstly, a gray scale image is constituted with three channels of the color image, and permuted by a sequence of chaotic pairs which is generated by two-coupled logistic map. Firstly, the permutation image is decomposed into three components again. Secondly, the first two components are encrypted into a single one based on iterative fractional Fourier transform. Similarly, the interim image and third component are encrypted into the final gray scale ciphertext with stationary white noise distribution, which has camouflage property to some extent. In the process of encryption and description, chaotic permutation makes the resulting image nonlinear and disorder both in spatial domain and frequency domain, and the proposed iterative fractional Fourier transform algorithm has faster convergent speed. Additionally, the encryption scheme enlarges the key space of the cryptosystem. Simulation results and security analysis verify the feasibility and effectiveness of this method. © 2012 Elsevier Ltd.

Number of references: 37

Main heading: Cryptography

Controlled terms: Fourier transforms - Image processing - Iterative methods - White noise

Uncontrolled terms: Ciphertexts - Color image encryptions - Color images - Convergent speed - Encryption schemes - Fractional Fourier transforms - Frequency domains - Gray scale - Gray-scale images - Iterative fractional - Logistic maps - Noise distribution - Security analysis - Single-channel - Spatial domains - Third component - Three channel - Three component - Two-component

Classification code: 921.3 Mathematical Transformations - 741 Light, Optics and Optical Devices - 723 Computer Software, Data Handling and Applications - 921.6 Numerical Methods - 718 Telephone Systems and Related Technologies; Line Communications - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves - 717 Optical Communication

DOI: 10.1016/j.optlastec.2012.10.016

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130215876943

Title: Color image encryption based on gyrator transform and Arnold transform

Authors: Sui, Liansheng¹ ; Gao, Bo¹/隋连升;高波

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Sui, L. (liudua2010@gmail.com)

Source title: Optics and Laser Technology

Abbreviated source title: Opt Laser Technol

Volume: 48

Issue date: 2013

Publication year: 2013

Pages: 530-538

Language: English

ISSN: 00303992

CODEN: OLTCAS

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: A color image encryption scheme using gyrator transform and Arnold transform is proposed, which has two security levels. In the first level, the color image is separated into three components: red, green and blue, which are normalized and scrambled using the Arnold transform. The green component is combined with the first random phase mask and transformed to an interim using the gyrator transform. The first random phase mask is generated with the sum of the blue component and a logistic map. Similarly, the red component is combined with the second random phase mask and transformed to three-channel-related data. The second random phase mask is generated with the sum of the phase of the interim and an asymmetrical tent map. In the second level, the three-channel-related data are scrambled again and combined with the third random phase mask generated with the sum of the previous chaotic maps, and then encrypted into a gray scale ciphertext. The encryption result has stationary white noise distribution and camouflage property to some extent. In the process of encryption and decryption, the rotation angle of gyrator transform, the iterative numbers of Arnold transform, the parameters of the chaotic map and generated accompanied phase function serve as encryption keys, and hence enhance the security of the system. Simulation results and security analysis are presented to confirm the security, validity and feasibility of the proposed scheme. © 2012 Elsevier Ltd. All rights reserved.

Number of references: 36

Main heading: Cryptography

Controlled terms: Chaotic systems - Gyrators - Image processing - White noise

Uncontrolled terms: Arnold transform - Chaotic map - Ciphertexts - Color image encryptions - Color images - Encryption and decryption - Encryption key -

Gray scale - Green component - Gyrator transform - Logistic maps - Noise distribution - Phase functions - Random phase masks - Red , green and blues - Rotation angles - Second level - Security analysis - Security level - Tent map - Three component

Classification code: 931 Classical Physics; Quantum Theory; Relativity - 921 Mathematics - 741 Light, Optics and Optical Devices - 723 Computer Software, Data Handling and Applications - 961 Systems Science - 718 Telephone Systems and Related Technologies; Line Communications - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves - 708.4 Magnetic Materials - 717 Optical Communication
DOI: 10.1016/j.optlastec.2012.11.020

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130215878829

Title: Pore size gradient hydroxyapatite scaffolds with interconnected pores fabricated by a template method

Authors: Tang, Yufei1 ; Zhao, Kang1 ; Hu, Long1/汤玉斐;赵康;胡龙

Author affiliation:

1 College of Materials Science and Engineering, Xi'an University of Technology, Xi'an Shaanxi 710048, China

Corresponding author: Tang, Y. (yftang@xaut.edu.cn)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 602-604

Monograph title: Progress in Materials and Processes

Issue date: 2013

Publication year: 2013

Pages: 1219-1222

Language: English

ISSN: 10226680

ISBN-13: 9783037855430

Document type: Conference article (CA)

Conference name: 2nd International Conference on Materials and Products Manufacturing Technology, ICMPMT 2012

Conference date: September 22, 2012 - September 23, 2012

Conference location: Guangzhou, China

Conference code: 94736

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Pore size gradient hydroxyapatite scaffolds with interconnected pores were fabricated using a novel template with graded polymer beads and slip casting. The microstructure, phase, porosity, and compression strength of the fabricated pore size gradient HA scaffolds were characterized. The scaffolds were also examined for their cell compatibility in vitro using human osteosarcoma (HOS) cells. By using a polymer template with graded sizes, the scaffolds showed

gradually increasing pore size of approximately 177-578 μm and interconnection size ranges from 71.5-290.7 μm along the cylindrical axis. The porosity of selected sections of the pore size gradient HA scaffolds ranged from 62.4-71.2%, while the compressive strength decreased from 8.1-3.72 MPa as the pore size and NaCl content increased. HOS cells showed best growth in sections of the scaffold with pore sizes of 480-578 μm . © (2013) Trans Tech Publications, Switzerland.

Number of references: 10

Main heading: Scaffolds (biology)

Controlled terms: Cells - Cytology - Fabrication - Hydroxyapatite - Pore size
- Sodium chloride

Uncontrolled terms: Cell compatibility - Compression strength - Cylindrical axis
- Human osteosarcoma - In-vitro - Interconnected pores - Interconnection size -
Polymer beads - Polymer templates - Size gradient - Slip casting - Template
methods

Classification code: 461.1 Biomedical Engineering - 461.2 Biological Materials and Tissue
Engineering - 804.2 Inorganic Compounds - 913.4 Manufacturing - 951 Materials
Science

DOI: 10.4028/www.scientific.net/AMR.602-604.1219

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130215878674

Title: In-situ production of (Fe,Cr)7C3 particulate bundles reinforced iron matrix
composites

Authors: Tian, Jinglai¹ ; Ye, Fangxia² ; Zhong, Lisheng³ ; Xu, Yunhua^{2/;;;}

Author affiliation:

1 School of Metallurgical Engineering, Xian University of Architecture and Technology, Xian,
China

2 School of Materials Science and Engineering, Xian University of Technology, Xian, China

3 Institute of Wear-resistance Materials, Xian University of Architecture and Technology, Xian,
China

Corresponding author: Tian, J. (tjl79@eyou.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 602-604

Monograph title: Progress in Materials and Processes

Issue date: 2013

Publication year: 2013

Pages: 456-459

Language: English

ISSN: 10226680

ISBN-13: 9783037855430

Document type: Conference article (CA)

Conference name: 2nd International Conference on Materials and Products Manufacturing

Technology, ICMPMT 2012

Conference date: September 22, 2012 - September 23, 2012

Conference location: Guangzhou, China

Conference code: 94736

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In-situ production of (Fe,Cr)₇C₃ particulate bundles -reinforced iron matrix composite was prepared by infiltration casting between Cr wires and white cast iron at 1200°C plus subsequent heat treatment. The composites under different heat treatment times were comparatively characterized by scanning electron microscopy (SEM) and pin-on-disc wear resistance tests. The results show that the area of the particle bundles gradually increases with the heat treatment time increasing, and the chemical compositions change from eutectic to hypoeutectic, the morphologies of the reinforcements present chrysanthemum-shaped, granular and intercrystalline eutectics. Under 5 N loads, the composites appear excellent wear resistance, which is 36 times for the reference sample. © (2013) Trans Tech Publications, Switzerland.

Number of references: 14

Main heading: Particle reinforced composites

Controlled terms: Composite materials - Eutectics - Heat treatment - Particles (particulate matter) - Reinforcement - Sandwich structures - Scanning electron microscopy - Wear resistance

Uncontrolled terms: Chemical compositions - Heat treatment time - In-situ - In-situ production - Infiltration casting - Intercrystalline - Iron matrix - Particulate bundles - Pin on disc - Resistance tests - Treatment time - White cast irons

Classification code: 415 Metals, Plastics, Wood and Other Structural Materials - 421 Strength of Building Materials; Mechanical Properties - 537.1 Heat Treatment Processes - 741.1 Light/Optics - 801.4 Physical Chemistry - 951 Materials Science

DOI: 10.4028/www.scientific.net/AMR.602-604.456

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130215895369

Title: Control for two-stage matrix converter excited doubly-fed wind generator

Authors: Wang, Junrui^{1, 2}; Zhong, Yanru¹/王君瑞;钟彦儒

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

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Corresponding author: Zhong, Y. (zhongyr@mail.xaut.edu.cn)

Source title: Taiyangneng Xuebao/Acta Energetica Solaris Sinica

Abbreviated source title: Taiyangneng Xuebao

Volume: 33

Issue: 11

Issue date: November 2012

Publication year: 2012

Pages: 1992-1998

Language: Chinese

ISSN: 02540096

CODEN: TYNPDG

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Two-stage matrix converter has a real DC link, but does not contain large DC-link energy storage capacitors compared with conventional PWM converters. Combined with the advantages of two-stage matrix converter, AC-excited generation technique and vector control scheme, the system of the doubly-fed wind power generation excited by two-stage matrix converter was established. The two-stage matrix converter realizes rectifier and inverter control with dual space voltage vector modulation. Based on the control models of idle-load grid-connection and running in steady state of doubly-fed wind power generator, it makes wind generator realize almost no impact current grid-connection and decoupling control of active power and reactive power by application the control strategy of the stator flux linkage orientation. The experimental results show that the two-stage matrix converter excitation doubly-fed wind power generation system can realize soft grid, output active and reactive power can be independent regulation.

Number of references: 12

Main heading: Electric rectifiers

Controlled terms: AC generator motors - Electric power generation - Electric power transmission networks - Reactive power - Vector spaces - Wind power - Wind turbines

Uncontrolled terms: Active power - Control model - Control strategies - DC links - Dc-link - Decoupling controls - Doubly-fed - Dual spaces - Energy storage capacitor - Generation techniques - Grid connections - Impact current - Inverter control - PWM converter - Running-in - Stator flux linkage orientation - Steady state - Two stage matrix converter - Variable speed constant frequency - Vector control scheme - Wind generator systems - Wind power generation systems

Classification code: 921 Mathematics - 714.2 Semiconductor Devices and Integrated Circuits - 706.1.1 Electric Power Transmission - 706 Electric Transmission and Distribution - 705.3.1 AC Motors - 615.8 Wind Power (Before 1993, use code 611) - 615

Thermoelectric, Magnetohydrodynamic and Other Power Generators

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130215883564

Title: Research on the hot current behavior in long and large highway tunnel fire

Authors: Wang, Meng¹ ; Cheng, Wen^{1, 2} ; Ma, Xia¹ ; Yang, Xin¹ / 王蒙;程文;马霞;杨欣

Author affiliation:

1 Key Laboratory of Northwest Water Resources and Environmental Ecology of Education Ministry, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Multiphase Flow in Power Engineering, Xi'an Jiaotong University,

Xi'an 710049, China

Corresponding author: Wang, M.

Source title: Kung Cheng Je Wu Li Hsueh Pao/Journal of Engineering Thermophysics

Abbreviated source title: Kung Cheng Je Wu Li Hsueh Pao

Volume: 33

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 2112-2115

Language: Chinese

ISSN: 0253231X

CODEN: KCJPDF

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Highway tunnel afford convenient traffic to people, which also brought many new issues to the prevention of fire. This paper presents three-dimensional numerical simulation with the method of CDF to development of the form of hot current behavior when fired in the Long and Large highway tunnel, regarding the single-hole and one-way tunnel as a research object in Qinling. The computational domain of this tunnel is the 200 m in length, the 65.37 m² in cross-sectional area the 10.5 m in total width and the 7.2 m in total height. Fire center is located at 100 m from the tunnel entrance. This research carries out the distribution of the concentration filed and velocity filed during the different condition of ventilation. It provides a reference for designing the plan of ventilation and the method of preventing fire scientifically.

Number of references: 11

Main heading: Research

Controlled terms: Computer simulation - Ventilation

Uncontrolled terms: Computational domains - Cross sectional area - Current behaviors - Fire size - Form of plume - Highway tunnel - Research object - Three-dimensional numerical simulations

Classification code: 643.5 Ventilation - 723.5 Computer Applications - 901.3 Engineering Research

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130215886158

Title: Selection of optimal architecture of rapid gradient descent method based on iterative design

Authors: Wei, Wei¹; Shen, Peiyi²; Hao, Meiping³; Song, Juan³; Zhang, Liang³; Xu, Hu³; Zhang, Wenzheng³; Wang, Wei¹/魏嵬;沈沛意;郝美萍;宋娟;张亮;胡旭;张文正;王伟

Author affiliation:

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2 National school of software, Xidian University, 710071, Xi'an, Shaanxi, China

3 Science and Technology on Communication Security Laboratory, 610041, Chengdu, China

Corresponding author: Shen, P. (pyshen@xidian.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 6

Issue: 23

Issue date: 2012

Publication year: 2012

Pages: 381-391

Language: English

ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Software testing is essential to ensure that the software Quality. On most software projects testing activities consume at least 30 percent of the project effort. On safety critical applications, software testing can consume between 50 to 80 percent of project effort. While the scale of software development and application expands dramatically, to guarantee the quality and reliability of software is becoming a huge challenge. For the ever-expanding software to reach the standard of Software Engineering, the best possible testing should be applied. During the testing, automatic generation of test data is especially important for improving testing efficiency. This paper presents the results of the author's study on problems and algorithms related to the automatic generation of software testing data. Results indicated that the method designed by the author can be used to perform iterative computation on needed data more efficiently, and then reach an essentially feasible solution. Although the exploratory study presented here proved rather demanding because few had adopted the approach, it has achieved positive results in improving the validity and the temporal and spatial complexity of the existent iterative algorithm.

Number of references: 18

Main heading: Software testing

Controlled terms: Algorithms - Computer software selection and evaluation - Conjugate gradient method - Iterative methods - Nonlinear programming - Software engineering - Software reliability

Uncontrolled terms: Automated test data generation - Automatic Generation - Exploratory studies - Feasible solution - Gradient Descent method - Iterative algorithm - Iterative computation - Iterative design - Optimal architecture - Program path - Safety critical applications - Software project - Software Quality - Spatial complexity - Test data - Testing efficiency

Classification code: 723 Computer Software, Data Handling and Applications - 921 Mathematics - 921.6 Numerical Methods

DOI: 10.4156/jdcta.vol6.issue23.43

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20130215886134

Title: LEACH-based energy-conserved improved protocol for WSNs

Authors: Wei, Wei1 ; Shen, Peiyi2 ; Zhang, Liang2 ; Xu, Hu2 ; Song, Juan2 ; Zhang, Wenzheng3 ; Wang, Wei1/魏巍;沈沛意;张亮;胡旭;宋娟;张文正;王伟

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 National school of Software, Xidian University, 710071, Xi'an, Shaanxi, China

3 Science and Technology on Communication Security Laboratory, 610041, Chengdu, China

Corresponding author: Shen, P. (pyshen@xidian.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 6

Issue: 23

Issue date: 2012

Publication year: 2012

Pages: 163-171

Language: English

ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: In wireless sensor networks (WSNs) environment, since the battery limitation of the node energy, energy efficiency is an key factor should be considered as the communication methods are designing. As classical and hierarchical routing protocols, Leach Protocol plays an important role. In response to the uneven energy distribution that is caused by the randomness of cluster heads forming, this paper presents a increased method of Leach protocol which is intended to trade off the energy consumption of the entire network and extend the life of the network. The new algorithm is verified by simulation platform, the simulation results show that the energy consumption and the lifetime of the network are both well improved than that of original Protocol.

Number of references: 13

Main heading: Computer simulation

Controlled terms: Energy efficiency - Energy utilization - Leaching - Wireless sensor networks

Uncontrolled terms: Cluster head - Communication method - Energy conserved - Energy distributions - Hierarchical routing protocol - Key factors - Network lifetime - Node energy - Simulation platform - Trade off - Wireless sensor network (WSNs)

Classification code: 525.2 Energy Conservation - 525.3 Energy Utilization - 533.1 Ore Treatment - 723.5 Computer Applications - 732 Control Devices

DOI: 10.4156/jdcta.vol6.issue23.19

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130215879946

Title: Mining frequent itemsets based on a vertical bit-vector dot-product CBD-tree

Authors: Yao, Quanzhu1 ; Zhang, Yubing1 ; Zhang, Jiulong1/姚全珠;张玉兵;张九龙

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Yao, Q. (qzyao@xaut.edu.cn)

Source title: Journal of Convergence Information Technology

Abbreviated source title: J. Convergence Inf. Technol.

Volume: 7

Issue: 23

Issue date: December 2012

Publication year: 2012

Pages: 393-399

Language: English

ISSN: 19759320

E-ISSN: 22339299

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Efficient algorithms for mining frequent itemsets are crucial for mining association rules as well as for many other data mining tasks. However, the traditional algorithms produce a large number of candidate frequent itemsets. In this paper, a new algorithm combining breadth-first with depth-first search strategy is proposed that does not generate a large number of candidate frequent itemsets and reduces the unnecessary operation. The proposed algorithm generates frequent patterns based on a vertical bit-vector dot-product and the method combining breadth-first with depth-first (CBD-Tree). Using the vertical bit-vector dot-product, the overhead of calculating data itemsets frequency has been decreased due to the efficient digit arithmetic instead of the comparisons. For CBD-tree, firstly, the frequent 1-itemsets L1 and the frequent 2-itemsets L2 are generated by breadth-first and effective pruning strategies are designed fully making use of the L2. Secondly, the CBD-tree is created by copying the generated subtree of frequent itemsets by depth-first. Finally, a large number of improper candidate itemsets are ruled out, and the frequent itemsets are generated in the process of tree building. The experimental results show that the proposed algorithm is more efficient due to reducing the storage space of the database and the time of generating the frequent itemsets.

Number of references: 10

Main heading: Trees (mathematics)

Controlled terms: Algorithms - Data mining - Digital storage - Forestry - Vectors

Uncontrolled terms: Breadth-first - Data mining tasks - Depth first - Depth first search - Dot-product - Item sets - Mining associations - Mining frequent itemsets - Pruning strategy - Storage spaces - Subtrees - Vertical bit-vector

Classification code: 722.1 Data Storage, Equipment and Techniques - 723 Computer Software, Data Handling and Applications - 821.0 Woodlands and Forestry - 921

Mathematics

DOI: 10.4156/jcit.vol7.issue23.46

Database: Compendex

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20130125 新增 4 条

1.

Accession number: 20130315905623

Title: Preparation and properties of graphene oxide nanosheets/cyanate ester resin composites

Authors: Lin, Qilang¹ ; Qu, Lijuan¹ ; Lü, Qiufeng¹ ; Fang, Changqing²;;方长青

Author affiliation:

1 College of Materials Science and Engineering, Fuzhou University, University Town, 2 Xue Yuan Road, Fuzhou, Fujian Province 350116, China

2 College of Printing and Packing Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Lin, Q. (linqilang@hotmail.com)

Source title: Polymer Testing

Abbreviated source title: Polym Test

Volume: 32

Issue: 2

Issue date: 2013

Publication year: 2013

Pages: 330-337

Language: English

ISSN: 01429418

CODEN: POTEDZ

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: Graphene oxide nanosheets (GONSs)/cyanate ester (CE) resin composites were prepared via a solution intercalation method. The structures of the GONSs and the composites were studied using Fourier transform infrared spectroscopy (FT-IR), X-ray diffraction (XRD), transmission electron microscopy (TEM) and scanning electron microscopy (SEM). The mechanical and tribological properties of the composites were investigated. In addition, the thermal behavior of the composites was characterized by thermogravimetric analysis (TGA). Results show that the GONSs/CE resin composites were successfully prepared. The addition of GONSs is beneficial to improve the mechanical and tribological properties of the composites. Moreover, the composites exhibit better thermal stability in comparison with the CE resin matrix.
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Number of references: 31

Main heading: Resins

Controlled terms: Composite materials - Esters - Fourier transform infrared spectroscopy - Scanning electron microscopy - Thermogravimetric analysis -

Transmission electron microscopy - Tribology - X ray diffraction
Uncontrolled terms: Cyanate esters - Ester resins - Graphene oxides -
Intercalation methods - Mechanical and tribological properties - Preparation -
Preparation and properties - Resin composites - Resin matrix - Thermal behaviors -
Transmission electron microscopy tem
Classification code: 951 Materials Science - 931 Classical Physics; Quantum Theory;
Relativity - 815.1.1 Organic Polymers - 811 Cellulose, Paper and Wood Products -
804.1 Organic Compounds - 801 Chemistry - 741.3 Optical Devices and Systems -
741.1 Light/Optics - 415 Metals, Plastics, Wood and Other Structural Materials
DOI: 10.1016/j.polymertesting.2012.11.014
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130315910019

Title: Fuzzy optimization of crowbar resistances for low-voltage ride through of
doubly-fed induction generators

Authors: Ma, Haomiao¹ ; Gao, Yong¹ ; Yang, Yuan¹ ; Zhang, Wenjuan²/马浩淼;高勇;杨媛;
张文娟

Author affiliation:

1 Automation and Information Engineering College, Xi'an University of Technology, Xi'an
710048, Shaanxi Province, China

2 Baoji University of Arts and Sciences, Baoji 721007, Shaanxi Province, China

Corresponding author: Ma, H. (mahaomiao@sina.com)

Source title: Zhongguo Dianji Gongcheng Xuebao/Proceedings of the Chinese Society of
Electrical Engineering

Abbreviated source title: Zhongguo Dianji Gongcheng Xuebao

Volume: 32

Issue: 34

Issue date: December 5, 2012

Publication year: 2012

Pages: 17-23

Language: Chinese

ISSN: 02588013

CODEN: ZDGXER

Document type: Journal article (JA)

Publisher: Chinese Society of Electrical Engineering, Qinghe, Beijing, 100085, China

Abstract: The crowbar control is one of the main methods for low voltage ride through (LVRT) of doubly-fed induction generators (DFIGs). The traditional crowbar resistance design is associated with the constraint boundary value of the stator and rotor current, and thus the system security is affected. From this point of view, the fuzzy optimization theory was applied to derive the estimation expression of the peak rotor current of DFIG and the constraints of the crowbar resistance in the case of three-phase short-circuit faults in power grids. According to the fuzzy optimization mechanism and above constraints, the fuzzy sets membership function and fuzzy objective function about the crowbar resistance were established. The crowbar resistance

of a 1.5 MW DFIG was designed by applying above fuzzy optimization method, and a series of simulations were conducted in the Matlab/Simulink platform. The simulation results show that the current of the rotor, oscillation of the bus voltage and the electromagnetic torque oscillation can be reduced by the crowbar resistance optimization, meanwhile, the operation reliability of DFIG sets can be effectively improved. © 2012 Chin. Soc. for Elec. Eng.

Number of references: 20

Main heading: Rotors (windings)

Controlled terms: Electric fault currents - Fuzzy sets - Membership functions - Optimization - Site selection

Uncontrolled terms: Bus voltage - Constraint boundaries - Doubly fed induction generators - Doubly fed induction-generator - Electromagnetic torques - Fuzzy objective function - Fuzzy optimization - Fuzzy optimization theory - Low-voltage - Low-voltage ride-through - MATLAB /simulink - Operation reliability - Power grids - Ride-through - Rotor current - Short-circuit fault - System security

Classification code: 402 Buildings and Towers - 403 Urban and Regional Planning and Development - 704.1 Electric Components - 706.2 Electric Power Lines and Equipment - 921 Mathematics - 921.5 Optimization Techniques

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130315910818

Title: An application of machine learning on the network security model

Authors: Wang, Hai-Chen¹ ; Zhao, Xiang-Mo¹ ; Wang, Hai-Sheng^{2/;;}

Author affiliation:

1 School of Information Engineering, Chang'an University, Nan Er Huan Zhong Duan, Xi'an 710064, China

2 Department of Computer Science and Technology, Xi'an University of Technology, No. 5, South Jinhua Road, Xi'an 710048, China

Corresponding author: Wang, H.-C. (Wanghc0212@yahoo.cn)

Source title: ICIC Express Letters

Abbreviated source title: ICIC Express Lett.

Volume: 7

Issue: 2

Issue date: 2013

Publication year: 2013

Pages: 291-296

Language: English

ISSN: 1881803X

Document type: Journal article (JA)

Publisher: ICIC Express Letters Office, Tokai University, Kumamoto Campus, 9-1-1, Toroku, Kumamoto, 862-8652, Japan

Abstract: Rough set classifier or SVM (Support Vector Machine) classifier is a typical machine learning model. Through inductive reasoning Rough set classifier is going to learn the general rule. The two classifiers are used to classify nodes into trust nodes, strange nodes and

malicious nodes. We use the Rough set classifier to replace the method by settings of the threshold. The innovation of the paper is to improve the computation accuracy and the efficiency of the classification computation by using Rough set combined with SVM classifier. In the cases that with the value of one or two attributes the corresponding classification result can be determined, we use the Rough set classifier. In other cases, we use SVM classifier. Compared with the existing security model, the simulation results indicate that the model can obtain higher examination rate over malicious nodes and the higher transaction success rate. © 2013 ISSN 1881-803X.

Number of references: 9

Main heading: Rough set theory

Controlled terms: Computational efficiency - Learning systems - Network security
- Support vector machines

Uncontrolled terms: Classification results - Computation accuracy - Inductive reasoning - Malicious nodes - Rough set - Security model - SVM classifiers - SVM(support vector machine)

Classification code: 723 Computer Software, Data Handling and Applications - 921 Mathematics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130315905159

Title: Using an external electric field to reduce laser damage of DLC films

Authors: Wu, Shen-Jiang^{1, 2}; Shi, Wei¹; Su, Jun-Hong²/吴慎将;施卫;苏俊宏

Author affiliation:

1 Department of Applied Physics, Xi'an University of Technology, Xi'an 710048, China

2 Key Laboratory of Film Technology and Optical Measurement, Xi'an Technological University, Xi'an 710032, China

Corresponding author: Wu, S.-J. (bxait@xatu.edu.cn)

Source title: International Journal of Materials and Product Technology

Abbreviated source title: Int J Mater Prod Technol

Volume: 45

Issue: 1-4

Issue date: 2012

Publication year: 2012

Pages: 74-82

Language: English

ISSN: 02681900

CODEN: IJMTE2

Document type: Journal article (JA)

Publisher: Inderscience Enterprises Ltd., Editorial Office, P O Box 735, Olney, Bucks., MK46 5WB, MK46 5WB, United Kingdom

Abstract: Unbalanced magnetron sputtering (UBMS) was used to deposit a diamond-like carbon (DLC) film on Si substrates. The film was subjected to a laser to result damages both before and after an external electric field was applied. A contrast of the damages shows that the

external electric field improves the film's laser induced damage threshold (LIDT) from 0.70 J/cm² up to 0.82 J/cm²; when the optical energy is maintained at 1.88 J/cm², the damaged area of the film decreases with increasing external electric field. The results show that the external electric field influences the anti-laser-damage ability of a DLC film because both the photoelectrons produced by the excitation from the laser and the free electrons in the DLC film can move quickly within the film. This movement indirectly decreases the energy density in the laser-irradiated area and slows down the DLC film's graphitisation process, consequently improving the film's ability to withstand laser damage. © 2012 Inderscience Enterprises Ltd.

Number of references: 15

Main heading: Laser damage

Controlled terms: Diamond deposits - Electric fields - Films - Graphite - Graphitization - Laser excitation - Lasers

Uncontrolled terms: Diamond-like carbon - DLC - Graphitisation - Laser induced damage thresholds - LIDT

Classification code: 482.2.1 Gems - 701.1 Electricity: Basic Concepts and Phenomena - 744 Lasers - 802.2 Chemical Reactions - 804 Chemical Products Generally - 933 Solid State Physics

DOI: 10.1504/IJMPT.2012.051342

Database: Compendex

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20130201 新增 11 条

1.

Accession number: 20130315915180

Title: The research of ecological water demand of Ulansuhai Nur based on the ecological protection targets

Authors: Gong, Linlin^{1, 2}; Huang, Qiang¹; Xue, Xiaojie¹; Jiang, Xiaohui³/巩琳琳;黄强;薛小杰;蒋晓辉

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1 Xi'an University of Technology, Xi'an 710048, China

2 Shaanxi Institute of Water Resources and Electric Power Investigation and Design, Xi'an 710001, China

3 Yellow River Institute of Hydraulic Research, Zhengzhou 450003, China

Corresponding author: Gong, L. (linlingong@126.com)

Source title: Shuili Fadian Xuebao/Journal of Hydroelectric Engineering

Abbreviated source title: Shuili Fadian Xuebao

Volume: 31

Issue: 6

Issue date: December 2012

Publication year: 2012

Pages: 83-88

Language: Chinese

ISSN: 10031243

Document type: Journal article (JA)
Publisher: Tsinghua University Press, Beijing, 100084, China
Abstract: This paper considers the existing ecological problem and actual situation of Ulansuhai Nur, and establishes its ecological protection targets, i. e. storage capacity of 240 - 943 million m³, water stage of 1018.35 - 1020 m, and water quality of class IV. With these targets and the water balance method, we conclude that a water balance of this lake requires the draining system to provide it a long-term water supply of 5.48×10^8 m³/a. The lake's water demand by its ecological environments under class IV quality is a primary representation of its ecological water demand. Using the environmental diluting method of water demand, we develops an ecological water demand model for the lake, and its calculations of the lake's ecological demands in 1, 5 and 10 years in the existing conditions are 973, 462 and 438 million m³ respectively. These demands could be reduced through pollution control, for instance, reduced to 678, 239 and 225 million m³ if the pollutant is cut down by 30%, and further to 607, 176 and 153 million m³ if cut down by 40%. The presented results are essential to the planning of ecological restoration in Ulansuhai Nur. © copyright.
Number of references: 15
Main heading: Ecology
Controlled terms: Lakes - Restoration - Water quality - Water supply
Uncontrolled terms: Draining systems - Ecological environments - Ecological problem - Ecological protection - Ecological restoration - Ecological water demand - Existing conditions - Storage capacity - Water balance - Water balance method - Water demand
Classification code: 402 Buildings and Towers - 407 Maritime and Port Structures; Rivers and Other Waterways - 409 Civil Engineering, General - 446.1 Water Supply Systems - 453.2 Water Pollution Control - 454.3 Ecology and Ecosystems
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
2.
Accession number: 20130315915205
Title: Analysis of cracking mechanism at the spandrel of large underground opening in laminar rock strata
Authors: He, Min^{1, 2} ; Wang, Mingjiang² ; Hao, Jungang² ; Li, Ning¹/何敏;王明疆;郝军刚;李宁
Author affiliation:
1 Institution of Geotechnical Engineering, Xi-an University of Technology, Xi-an 710048, China
2 Northwest Institute of Exploration, Design and Research, CHECC, Xi-an 710048, China
Corresponding author: He, M. (hem@nwh.cn)
Source title: Shuili Fadian Xuebao/Journal of Hydroelectric Engineering
Abbreviated source title: Shuili Fadian Xuebao
Volume: 31
Issue: 6
Issue date: December 2012
Publication year: 2012
Pages: 237-241+185

Language: Chinese

ISSN: 10031243

Document type: Journal article (JA)

Publisher: Tsinghua University Press, Beijing, 100084, China

Abstract: The underground cavern group of the Ludila hydropower station is one of the largest underground projects on Jinsha River. When its excavation was completed, a number of splits appeared at its downstream spandrel, a similar phenomena that has been found in other underground powerhouses. This work took the Ludila underground powerhouse as a case study to find the causes for such phenomenon that is vital to stability of large caverns, and to explore reasonable reinforcement measures, through analyzing the geological features, initial stress, monitored displacements and numerical simulations. The results indicate that stress concentration was induced by tilt geo-stress and anisotropy of the rock mass and rock deflection at the downstream spandrel under excavation unloading. A concept of deflection index is put forth for evaluation of the depths and range of the splits. © copyright.

Number of references: 4

Main heading: Rocks

Controlled terms: Caves - Convergence of numerical methods - Excavation - Numerical analysis - Soil mechanics - Stress concentration - Underground power plants - Unloading

Uncontrolled terms: Cracking mechanisms - Excavation unloading - Geo-stress - Geological features - Hydropower stations - Initial stress - Rock and soil mechanics - Rock mass - Rock stratus - Underground cavern group - Underground opening - Underground powerhouse

Classification code: 921.6 Numerical Methods - 674.1 Small Marine Craft - 614 Steam Power Plants - 613 Nuclear Power Plants - 502.1 Mine and Quarry Operations - 483.1 Soils and Soil Mechanics - 481.1 Geology - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130315915407

Title: Temperature-rise performance of steel balls coated with CrCN thick films

Authors: Jia, Guixi1 ; Chang, Jiadong1 ; Li, Yan2 ; Xie, Yintao3/贾贵西;常家东;李言;谢银涛

Author affiliation:

1 Luoyang Institute of Science and Technology, Luoyang 471023, China

2 School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

3 China Aviation Optical-Electrical Technology Co. Ltd., Luoyang 471003, China

Corresponding author: Jia, G. (jiaguixi06@163.com)

Source title: Zhenkong Kexue yu Jishu Xuebao/Journal of Vacuum Science and Technology

Abbreviated source title: Zhenkong Kexue yu Jishu Xuebao

Volume: 32

Issue: 12

Issue date: December 2012

Publication year: 2012
 Pages: 1074-1077
 Language: Chinese
 ISSN: 16727126
 CODEN: CKKSDV
 Document type: Journal article (JA)
 Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China
 Abstract: The CrCN composite coatings were deposited by closed-field unbalanced magnetron sputtering ion plating, on substrates of 6204 bearing steel balls, 45# steel and Si wafer. The impacts of the coating conditions on microstructures of the coating were evaluated. The surface morphologies and properties of the CrCN coatings were characterized with atomic force microscopy, and conventional mechanical probes. The temperature-rise performance of the steel balls, with or without the CrCN coatings, was studied. The results show that the CrCN coated steel ball outperforms the control sample in many ways, such as smoother and more compact surfaces, lower friction coefficient (about 0.11~0.12), higher wear-resistance, and better temperature-rise performance.
 Number of references: 12
 Main heading: Thick films
 Controlled terms: Atomic force microscopy - Bearings (structural) - Composite coatings - Ion implantation - Magnetron sputtering - Silicon wafers - Wear resistance
 Uncontrolled terms: Bearing steels - Closed-field unbalanced magnetron sputtering - Coated steel - Control samples - CrCN coatings - Friction coefficients - Ion plating - Mechanical probes - Si wafer - Steel balls - Temperature rise
 Classification code: 932.1 High Energy Physics - 813.2 Coating Materials - 813.1 Coating Techniques - 741.3 Optical Devices and Systems - 714.2 Semiconductor Devices and Integrated Circuits - 421 Strength of Building Materials; Mechanical Properties - 408.2 Structural Members and Shapes
 DOI: 10.3969/j.issn.1672-7126.2012.12.03
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 4.
 Accession number: 20130315915181
 Title: Design and development of component-based hydrological application integration platform (CHAIP)
 Authors: Jiang, Rengui¹; Xie, Jiancang¹; Li, Jianxun¹; Li, Weiqian¹; Chen, Tianqing¹/姜仁贵;解建仓;李建勋;李维乾;陈田庆
 Author affiliation:
 1 Key Lab. of Northwest Water Resources and Environment Ecology of MOE, Xian University of Technology, Xi'an 710048, China
 Corresponding author: Jiang, R. (jrengui@163.com)
 Source title: Shuili Fadian Xuebao/Journal of Hydroelectric Engineering
 Abbreviated source title: Shuili Fadian Xuebao
 Volume: 31

Issue: 6
Issue date: December 2012
Publication year: 2012
Pages: 89-95
Language: Chinese
ISSN: 10031243
Document type: Journal article (JA)
Publisher: Tsinghua University Press, Beijing, 100084, China
Abstract: This paper designs and develops a component-based hydrological application integration platform (CHAIP) of flood control to implement standardization of hydrological information processing and application integration on this platform, avoiding disadvantages of the existing system, hard to integrate multi-source information and single mode of representation in flood control. The platform adopts key techniques of component-based coding, object-oriented language, framework, and three-dimensional simulation. Its architecture consists of a data layer, a server layer, an application layer and a client layer; different functional models at the application layer are designed separately with a modularization idea. Application in a case study of flood control in Shaanxi province shows that the platform is good in extendibility, three-dimensional performance and real-time application, and very easy to operate. Thus, CHAIP provides a support to processing, analysis and decision making in flood control with a good prospect in applications. © copyright.
Number of references: 12
Main heading: Flood control
Controlled terms: Data processing - Floods - Integration - Modular construction
Uncontrolled terms: Application integration - Application layers - Component based - Data layer - Design and Development - Existing systems - Functional model - Information integration - ITS architecture - Key techniques - Modularizations - Multisources - Object-oriented languages - Real-time application - Single mode - Three dimensional simulations
Classification code: 405.2 Construction Methods - 454.1 Environmental Engineering, General - 723.2 Data Processing and Image Processing - 914.1 Accidents and Accident Prevention - 921.2 Calculus
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
5.
Accession number: 20130415918174
Title: Effect of growth gas flow rate on the SiC crystal resistivity
Authors: Lin, Shenghuang¹ ; Chen, Zhiming¹/林生晃;陈治明
Author affiliation:
1 Department of Electronic Engineering, Xi'an University of Technology, Xi'an 710048, China
Corresponding author: Lin, S. (shenghuanglin@163.com)
Source title: Journal of Materials Research
Abbreviated source title: J Mater Res
Volume: 28
Issue: 1

Issue date: January 14, 2013

Publication year: 2012

Pages: 23-27

Language: English

ISSN: 08842914

E-ISSN: 20445326

CODEN: JMRREE

Document type: Journal article (JA)

Publisher: Cambridge University Press, 40 West 20th Street, New York, NY 10011-4211, United States

Abstract: A technique of controlling growth gas flow rate for adjusting crystal resistivity is presented in this paper. The experimental results showed that high growth gas flow rate could affect SiC crystal resistivity remarkably. The SiC crystal resistivity would get higher and higher with increasing growth gas flow rate. The purifying effect of gas flow rate was contributing to resistivity increase at a relatively low flow rate range. As for the high gas flow rate, increase of resistivity might be explained by the well-known site competition effect. Then, one explanation for reducing nitrogen content in the crystal via increasing gas flow rate was put forward. Namely, the Si component in the gas species may more easily go through the graphite crucible at the

initial stage to make the growth ambient C-rich when the gas flow rate is ~800 sccm or more and

hence suppress nitrogen incorporation into carbon site to increase crystal resistivity. This result is very helpful to grow high purity high resistivity SiC ingots. © 2012 Materials Research Society.

Number of references: 17

Main heading: Flow rate

Controlled terms: Electric conductivity - Flow of gases - Metal castings - Nitrogen - Silicon carbide

Uncontrolled terms: Competition effects - Gas species - Graphite crucibles - Growth ambient - High growth - High purity - High-resistivity SiC - Initial stages - Nitrogen content - Nitrogen incorporation - Physical vapor transport - Purifying effect - SiC

Classification code: 534.2 Foundry Practice - 631 Fluid Flow - 631.1.2 Gas Dynamics - 701.1 Electricity: Basic Concepts and Phenomena - 804 Chemical Products Generally - 804.2 Inorganic Compounds

DOI: 10.1557/jmr.2012.203

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130415919816

Title: Blind detection of image splicing based on run length matrix combined properties

Authors: Liu, Han¹ ; Yang, Yun¹ ; Shang, Minqing¹/刘涵;杨云;

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an,

710048, China

Corresponding author: Liu, H. (liuhan@xaut.edu.cn)

Source title: Proceedings of the World Congress on Intelligent Control and Automation (WCICA)

Abbreviated source title: Proc. World Congr. Intelligent Control Autom. WCICA

Monograph title: WCICA 2012 - Proceedings of the 10th World Congress on Intelligent Control and Automation

Issue date: 2012

Publication year: 2012

Pages: 4545-4550

Article number: 6359340

Language: English

ISBN-13: 9781467313988

Document type: Conference article (CA)

Conference name: 10th World Congress on Intelligent Control and Automation, WCICA 2012

Conference date: July 6, 2012 - July 8, 2012

Conference location: Beijing, China

Conference code: 94938

Sponsor: Academy of Mathematics and Systems Science; IEEE Robotics and Automation Society; IEEE Control Systems Society; National Natural Science Foundation of China; Chinese Association of Automation

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: Image splicing is a technique commonly used in image tampering. In order to achieve image splicing blind detection, a blind, passive, yet effective splicing detection method is proposed in this paper. In this method run length matrix is used to extract image feature and generate the identification model with combination of Neighborhood DCT Coefficient Co-occurrence Matrix Feature and Markov Feature. Support vector machines (SVM) also is selected as classifier for training and testing while genetic algorithm is used to optimize parameters based on evaluation criteria AUC. Experimental results show that there is high classification accuracy for obtained model by this method. © 2012 IEEE.

Number of references: 16

Main heading: Support vector machines

Controlled terms: Intelligent control

Uncontrolled terms: AUC - Blind detection - Classification accuracy -

Co-occurrence-matrix - DCT coefficients - Detection methods - Evaluation criteria -

Identification model - Image features - Image splicing - Image tampering -

Markov - Run length - Training and testing

Classification code: 723 Computer Software, Data Handling and Applications - 723.4.1 Expert Systems

DOI: 10.1109/WCICA.2012.6359340

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130415919601

Title: Adaptive decoupling control systems based on SVM for large supercritical CFB boilers combustion system

Authors: Liu, La-Xun¹ ; Liu, Han¹ ; Hui-Long Wang¹/;刘涵;

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, Shaanxi, China

Corresponding author: Liu, L.-X. (liuhan@xaut.edu.cn)

Source title: Proceedings of the World Congress on Intelligent Control and Automation (WCICA)

Abbreviated source title: Proc. World Congr. Intelligent Control Autom. WCICA

Monograph title: WCICA 2012 - Proceedings of the 10th World Congress on Intelligent Control and Automation

Issue date: 2012

Publication year: 2012

Pages: 3401-3406

Article number: 6359035

Language: Chinese

ISBN-13: 9781467313988

Document type: Conference article (CA)

Conference name: 10th World Congress on Intelligent Control and Automation, WCICA 2012

Conference date: July 6, 2012 - July 8, 2012

Conference location: Beijing, China

Conference code: 94938

Sponsor: Academy of Mathematics and Systems Science; IEEE Robotics and Automation Society; IEEE Control Systems Society; National Natural Science Foundation of China; Chinese Association of Automation

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: An α th-order inversed decoupling control method based on least square support vector machines (LS-SVM) is presented to resolve the difficulties of inverse modeling with the traditional inverse control methods in this paper. The nonlinear offline inverse model of plant is built by LS-SVM, which is cascaded before the original system to decouple a complex multivariable input and output system into several independent single input single output pseudo-linear sub-systems. In order to make it have better robustness, with single neuron adaptive PID as subsystem additional linear controller to constitute a closed-loop system. The characteristics of combustion system of circulating fluidized bed boilers also are analyzed and control system based on presented methods is presented. The simulation results demonstrated that the presented method could achieve accurate decoupling control with robustness. © 2012 IEEE.

Number of references: 7

Main heading: Robustness (control systems)

Controlled terms: Fluidized beds - Fuel systems - Intelligent control - Inverse problems - Linear control systems - Multivariable systems - Pulverized fuel fired boilers - Support vector machines
Uncontrolled terms: Adaptive decoupling - Adaptive PID - CFB boilers - Circulating fluidized bed boiler - Combustion systems - Decoupling control methods - Decoupling controls - Input and outputs - Inverse control - Inverse modeling - Inverse models - Least square support vector machines - Linear controllers - Multi variables - Offline - Original systems - Single input single output - Single neuron adaptive - Sub-systems - Supercritical
Classification code: 802.1 Chemical Plants and Equipment - 731.1 Control Systems - 723 Computer Software, Data Handling and Applications - 921 Mathematics - 614 Steam Power Plants - 523 Liquid Fuels - 522 Gas Fuels - 524 Solid Fuels
DOI: 10.1109/WCICA.2012.6359035
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130415923477

Title: An enriched radial point interpolation meshless method based on partition of unity

Authors: Ma, Wen-Tao^{1, 2}; Li, Ning¹; Shi, Jun-Ping¹/马文涛;李宁;师俊平

Author affiliation:

1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Department of Mathematics and Computer Engineering, Ningxia University, Yinchuan 750021, China

Corresponding author: Ma, W.-T. (wt-ma2002@163.com)

Source title: Yantu Lixue/Rock and Soil Mechanics

Abbreviated source title: Rock Soil Mech

Volume: 33

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 3795-3800

Language: Chinese

ISSN: 10007598

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: An enriched radial point interpolation meshless method(X-RPIM) was presented for the linear elastic fracture problem. In order to represent the discontinuous displacement field along crack face and stress singularity around the crack tip, enriched functions were added in the approximation of traditional radial point interpolation meshless method (RPIM) based on the ideas of partition of unity. The merit of presented method is that the shape functions have the properties of Kronecker δ functions, which would make the essential boundary be implemented easily. The construction of discontinuous approximation function, the discrete format of governing equation and the evaluated process of the mixed-mode stress intensity factors by

using the J integral method are introduced in detail in X-RPIM. The impact for the computational results of stress intensity factors using different integral domains of crack tip is discussed. Analyses of numerical examples demonstrate that the enriched radial point interpolation meshless method can effectively solve fracture problem, and has practical merits for modeling crack growth problem.

Number of references: 15

Main heading: Problem solving

Controlled terms: Crack propagation - Crack tips - Fracture - Interpolation - Stress intensity factors

Uncontrolled terms: Approximation function - Computational results - Crack faces - Discontinuous displacement field - Governing equations - Growth problems - Integral domains - J-integral method - Linear elastic fracture - Mesh-less methods - Mixed-mode stress - Numerical example - Partition of unity - Radial point interpolations - Shape functions - Stress singularities

Classification code: 421 Strength of Building Materials; Mechanical Properties - 921

Mathematics - 921.6 Numerical Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130315915213

Title: Process neural network based on EMD for fault fusion diagnosis of draft tube

Authors: Wang, Han^{1, 2}; Zhang, Xinwei²; Luo, Xingqi²; Xu, Minghai³/王瀚;张欣伟;罗兴琦;许明海

Author affiliation:

1 Hydro-China Xibei Engineering Corporation, Xi'an 710065, China

2 Department of Power Engineering, Xi'an University of Technology, Xi'an 710048, China

3 Gansu Jiuquan Power Supply Company, Jiuquan, Gansu 735000, China

Corresponding author: Luo, X. (hwang_spirit@126.com)

Source title: Shuili Fadian Xuebao/Journal of Hydroelectric Engineering

Abbreviated source title: Shuili Fadian Xuebao

Volume: 31

Issue: 6

Issue date: December 2012

Publication year: 2012

Pages: 282-287

Language: Chinese

ISSN: 10031243

Document type: Journal article (JA)

Publisher: Tsinghua University Press, Beijing, 100084, China

Abstract: To diagnose accurately vortex rope in the draft tube of hydraulic turbine, this paper presents a new method of fault diagnosis based on empirical mode decomposition (EMD), index energy and process neural network (PNN). This method adopts an EMD method to decompose the monitored pressure pulsation signals of draft tube and constructs index energy vectors of the signals. Then it takes those vectors as fault samples to train a three-layer discrete

feedforward process neural network, establishes a mapping of dynamic feature vectors into fault type, and finally realizes intelligent fault diagnosis. Application to a practical example shows that the method converges faster and its forecast accuracy is higher than that of traditional RBF or BP neural network. The method produces a small average classification error and hence it is suitable for vortex fusion fault diagnosis of draft tube. © copyright.

Number of references: 11

Main heading: Hydraulic turbines

Controlled terms: Neural networks - Signal processing - Tubes (components) - Vortex flow

Uncontrolled terms: Draft tubes - Fusion diagnosis - Hydroturbines - Index energy - Process neural network - Vertex strip

Classification code: 616.1 Heat Exchange Equipment and Components - 617.1 Hydraulic Turbines - 631.1 Fluid Flow, General - 716.1 Information Theory and Signal Processing - 723.4 Artificial Intelligence

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130415923574

Title: Calibration-free and model-independent method for high-DOF image-based visual servoing

Authors: Zhang, Jie¹ ; Liu, Ding¹;刘丁

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an Shaanxi, 710048, China

Corresponding author: Zhang, J. (zhangjlive@163.com)

Source title: Journal of Control Theory and Applications

Abbreviated source title: J. Control Theory Appl.

Volume: 11

Issue: 1

Issue date: 2013

Publication year: 2013

Pages: 132-140

Language: English

ISSN: 16726340

E-ISSN: 10008152

Document type: Journal article (JA)

Publisher: South China University of Technology, Guangzhou, 510640, China

Abstract: This paper presents a novel method to improve the performance of high-DOF image base visual servoing (IBVS) with an uncalibrated camera. Firstly, analysis and comparison between point-based and moment-based features are carried out with respect to a 4-DOF positioning task. Then, an extended interaction matrix (IM) related to the digital image, and a Kalman filter (KF)-based estimation algorithm of the extended IM without calibration and IM model are proposed. Finally, the KF-based algorithm is extended to realize an approximation to decoupled control scheme. Experimental results conducted on an industrial robot show that our

proposed methods can provide accurate estimation of IM, and achieve similar performance compared with traditional calibration-based method. Therefore, the proposed methods can be applied to any robot control system in variational environments, and can realize instant operation to planar object with complex and unknown shape at large displacement. © 2013 South China University of Technology, Academy of Mathematics and Systems Science, Chinese Academy of Sciences and Springer-Verlag Berlin Heidelberg.

Number of references: 14

Main heading: Visual servoing

Controlled terms: Approximation algorithms - Calibration - Kalman filters - Robot applications

Uncontrolled terms: Accurate estimation - Decoupled control - Digital image - Estimation algorithm - Extended interaction - Image moments - Image-based - Interaction matrices - Large displacements - Point-based - Positioning tasks - Robot control systems - Un-calibrated camera

Classification code: 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 921 Mathematics - 732 Control Devices - 731 Automatic Control Principles and Applications

DOI: 10.1007/s11768-013-0271-7

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130415923799

Title: Hybrid Monte Carlo sampling implementation of Bayesian support vector machine

Authors: Zhou, Yatong1 ; Li, Jin1 ; Liu, Long2/;;刘泷

Author affiliation:

1 School of Information Engineering, Hebei University of Technology, China

2 School of automation, Xi'an University of Technology, China

Corresponding author: Zhou, Y. (zyt@hebut.edu.cn)

Source title: Advances in Information Sciences and Service Sciences

Abbreviated source title: Adv. Inf. Sci. Serv. Sci.

Volume: 5

Issue: 1

Issue date: 2013

Publication year: 2013

Pages: 284-290

Language: English

ISSN: 19763700

E-ISSN: 22339345

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: The Bayesian support vector machine (BSVM) is a probabilistic machine learning

method with high level of performance. Currently BSVM has been numerically implemented with three methods including Laplace approximation, mean field and variational method. This paper proposes a new numerical method to implement BSVM with Hybrid Monte Carlo (HMC) sampling. In the sampling process, an auxiliary variable was introduced to reduce the sampling difficulty, and the frog leap was added to avoid the random walk. Experimental results on simulated data regression indicate the proposed method is feasible. Simultaneously, the effect of parameters such as step number, step size, and sampling number on performance of BSVM is analyzed.

Number of references: 14

Main heading: Support vector machines

Controlled terms: Monte Carlo methods

Uncontrolled terms: Auxiliary variables - Data regression - Effect of parameters

- Frog leap - Hybrid Monte Carlo - Laplace approximation - Mean field -

Probabilistic machines - Random Walk - Sampling process - Step number - Step size - Variational methods

Classification code: 723 Computer Software, Data Handling and Applications - 922.2

Mathematical Statistics

DOI: 10.4156/AISS.vol5.issue1.35

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

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20130208 新增 42 条

1.

Accession number: 20130515975207

Title: Numerical test study on ground frost heave deformation caused by artificial horizontal ground freezing method

Authors: Bi, Guiquan^{1, 2}; Wang, Dong¹; Li, Ning³/毕贵权;;李宁

Author affiliation:

1 School of Energy and Power Engineering, Lanzhou University of Technology, Lanzhou 730050, China

2 State Key Laboratory of Frozen Soil Engineering, CAREERI, CAS, Lanzhou 730000, China

3 Institute of Geotechnical Engineering, Xi'an university of technology, Xi'an 710048, China

Corresponding author: Bi, G. (biguiquan@gmail.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

Pages: 340-343

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855652
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012
 Conference date: October 27, 2012 - October 28, 2012
 Conference location: Guilin, China
 Conference code: 95112
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: Aiming at frost heave problem existing in tunnel construction with artificial horizontal ground freezing in coastal areas, this paper puts forward an equivalent load method for frost heave simulation and a nonlinear deformation simulation method for soil around frost wall. Employing the numerical test method, the designing parameters' influence on ground frost heave is studied systematically. These parameters include depth of tunnel, frozen wall thickness, excavation radius of tunnel and frost heaving ratio. Furthermore, some measures are proposed to reduce ground frost heave. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 5
 Main heading: Numerical methods
 Controlled terms: Civil engineering - Deformation - Excavation - Freezing
 Uncontrolled terms: Coastal area - Equivalent load - Frost heave - Frost heave deformation - Frost heaving - Frozen wall thickness - Ground freezing - Nonlinear deformations - Numerical tests - Tunnel construction
 Classification code: 409 Civil Engineering, General - 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 502.1 Mine and Quarry Operations - 822.2 Food Processing Operations - 921.6 Numerical Methods
 DOI: 10.4028/www.scientific.net/AMM.256-259.340
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 2.
 Accession number: 20130515963370
 Title: Visual attention based SAR image small target detection
 Authors: Bo, Hua¹ ; Gu, Haiyun¹ ; Sun, Qiang²;;孙强
 Author affiliation:
 1 School of Information and Electronic Engineering, Shanghai Maritime University, Shanghai 201304, China
 2 Department of Electronic Engineering, Xi'an University of Technology, Xi'an 710048, China
 Corresponding author: Bo, H. (huabo@shmtu.edu.cn)
 Source title: Journal of Computational Information Systems
 Abbreviated source title: J. Comput. Inf. Syst.
 Volume: 9
 Issue: 1
 Issue date: January 1, 2013
 Publication year: 2013

Pages: 179-186
 Language: English
 ISSN: 15539105
 Document type: Journal article (JA)
 Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States
 Abstract: More and more attention to the protection of the marine environment, Synthetic Aperture Radar (SAR) images based the oil spill and ship detection became an important topic of study. Ships and oil spills often present small targets in SAR images, at the same time due to the inherent in SAR image speckle noise, often makes the oil spill and ship are difficult to be accurately detected. This paper proposed a new small target detection method for ships and oil spills in SAR images, which is a combination of multi-scale Gaussian and Gabor filter banks by using focus detection method based on visual attention. Simulation results show that the method has high detection accuracy and verify the effectiveness of the method. © 2013 Binary Information Press.
 Number of references: 13
 Main heading: Synthetic aperture radar
 Controlled terms: Filter banks - Oil spills - Ships
 Uncontrolled terms: Detection accuracy - Focus detection - Gaussians - Marine environment - Multiscales - SAR Images - Ship detection - Small target detection - Small targets - Speckle noise - Synthetic aperture radar (SAR) images - Visual Attention
 Classification code: 914.1 Accidents and Accident Prevention - 716.2 Radar Systems and Equipment - 716 Telecommunication; Radar, Radio and Television - 713 Electronic Circuits - 674 Small Craft and Other Marine Craft - 672 Naval Vessels - 671 Naval Architecture
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 3.
 Accession number: 20130515975195
 Title: Research on the shear strength properties of expansive soils
 Authors: Chen, Yi1, 2 ; Zhao, Jing1 ; Hu, Xiao-Hong1/;赵璟;
 Author affiliation:
 1 School of Civil Engineering and Architecture, Xi'an University of technology, Xi'an, 710048, China
 2 College of Architecture and Transportation Engineering, Guilin university of electronic technology, Guilin, 541004, China
 Corresponding author: Chen, Y. (chenyi1015@guet.edu.cn)
 Source title: Applied Mechanics and Materials
 Abbreviated source title: Appl. Mech. Mater.
 Volume: 256-259
 Issue: PART 1
 Monograph title: Advances in Civil Engineering II
 Issue date: 2013
 Publication year: 2013
 Pages: 287-292

Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855652
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012
 Conference date: October 27, 2012 - October 28, 2012
 Conference location: Guilin, China
 Conference code: 95112
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: The shear strength of expansive soils is now a key geotechnical problem. The water content and dry density of expansive soils have deep effect on its shear strength. For analyzing the detail relationship of the water content, dry density and shear strength of this special soil, direct shear test was carried out with the samples from Xinxiang in middle line of South to North water diversion project. The results indicate that both of the cohesion and friction angle grow with dry density and decrease with initial water content. Applying the linear regression calculation, we obtained mathematical expressions which reveal the variation of shear strength with the dry density and initial water content of Xinxiang expansive soils. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 6
 Main heading: Shear strength
 Controlled terms: Civil engineering - Soil structure interactions
 Uncontrolled terms: Direct shear test - Dry density - Expansive soils - Friction angles - Geotechnical problems - Mathematical expressions - South-to-North water diversion project - Strength property
 Classification code: 409 Civil Engineering, General - 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 483.2 Foundations
 DOI: 10.4028/www.scientific.net/AMM.256-259.287
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 4.
 Accession number: 20130515971614
 Title: An application of matter-element analysis theory to vulnerability of urban river
 Authors: Fang, Zheng1 ; Wang, Ni1/方正;汪妮
 Author affiliation:
 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, Xi'an, China
 Corresponding author: Fang, Z. (jerryfang47@163.com)
 Source title: Proceedings - 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012
 Abbreviated source title: Proc. - Int. Conf. Fuzzy Syst. Knowl. Discov., FSKD

Monograph title: Proceedings - 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012

Issue date: 2012

Publication year: 2012

Pages: 2569-2572

Article number: 6234101

Language: English

ISBN-13: 9781467300223

Document type: Conference article (CA)

Conference name: 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012

Conference date: May 29, 2012 - May 31, 2012

Conference location: Chongqing, China

Conference code: 95177

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: According to the characteristics of urban rivers, considering the hydrology conditions and socioeconomic conditions, setting out from the important factors that affects the vulnerability, this paper presents a Vulnerability Assessment System established for urban rivers, researches the vulnerability of different reach, so as to provide reference for use and protection of urban rivers. Several appropriate evaluation indexes are chosen to analyze the vulnerability level of the Chanba River by Matter-element Analysis Theory, and use rough set theory to determine the weight. The results indicate that the MA Du-wang and Chang Jia-bay, where is located in the eastern suburb of Xi'an and is affected greatly by human factors, have the highest vulnerability, other places have medium vulnerability. © 2012 IEEE.

Number of references: 8

Main heading: Rivers

Controlled terms: Fuzzy systems - Rough set theory

Uncontrolled terms: Evaluation index - Matter-element analysis -

Socio-economic conditions - Urban river - vulnerability - Vulnerability assessments

Classification code: 407.2 Waterways - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI: 10.1109/FSKD.2012.6234101

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

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5.

Accession number: 20130415941698

Title: Configuration of product satisfaction index weights based on SEM

Authors: Ge, Chang1 ; Yu, Suihuai2 ; Ji, Xiaomin1 ; Xiong, Daqing1/;;吉晓民;熊大庆

Author affiliation:

1 Industrial Design Department, School of Art and Design, Xi'an University of Technology, Xi'an, China

2 Industrial Design Institute, Northwestern Polytechnical University, Xi'an, China

Corresponding author: Ge, C. (shenyi17@gmail.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 271

Issue: PART 1

Monograph title: Frontiers of Manufacturing and Design Science III

Issue date: 2013

Publication year: 2013

Pages: 417-421

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855782

Document type: Conference article (CA)

Conference name: 3rd International Conference on Frontiers of Manufacturing and Design Science, ICFMD 2012

Conference date: December 11, 2012 - December 13, 2012

Conference location: Hong kong

Conference code: 95055

Sponsor: Control Eng. Inf. Sci. Res. Assoc.; International Frontiers of science; and technology Research Association; National Chin-Yi University of Technology; Integrated Research Center for Green Living Techniques; Trans Tech Publication

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In the process of product satisfaction solution by SEM (Structural Equation Modeling), the model of product satisfaction has been revised aiming at solving the weights of satisfaction index distribution in the multi-sample situation. According to the characteristic of satisfaction data sampling, the partial least square is introduced, and the algorithmic method of satisfaction weights based on SEM is presented. The proposed method has been validated by an example of digital photo frame. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Design

Controlled terms: Manufacture

Uncontrolled terms: Algorithmic methods - Data sampling - Digital photos - Index distribution - Index weight - Partial least square (PLS) - Product satisfaction - Structural equation modeling - Structure equations - Weights

Classification code: 408 Structural Design - 537.1 Heat Treatment Processes

DOI: 10.4028/www.scientific.net/AMM.271-272.417

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130415932638

Title: Algorithms of data mining and knowledge discovery of correlativity in two-dimensional time series

Authors: Hu, Shaolin1 ; Li, Ye2 ; Zhang, Wei1/;李晔;

Author affiliation:

1 State Key Laboratory of Astronautic Dynamics, Xi'an City, 710043, China

2 School of Automation, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Hu, S. (hfkth@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 263-266

Issue: PART 1

Monograph title: Information Technology Applications in Industry

Issue date: 2013

Publication year: 2013

Pages: 1844-1848

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855744

Document type: Conference article (CA)

Conference name: 2012 International Conference on Information Technology and Management Innovation, ICITMI 2012

Conference date: November 10, 2012 - November 11, 2012

Conference location: Guangzhou, China

Conference code: 95052

Sponsor: Information Science School of Guangdong; University of Business Studies

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Oriented at dynamic data from complicated process with noise disturbance, it is very difficult to discover knowledge of correlativity and orderliness. Following some analyzing results about the shortcoming of relative coefficients in mining non-stationary time series, a series of new algorithms are built in this paper to mine correlativity in two-dimensional time series. These new algorithms are based on a expansible framework of model set. Based on these new mining algorithms, a making decision table is listed not only to mine correlativity in two-dimensional time series, but also to discover deepening knowledge to transform the qualitative knowledge "nonlinear relativity" as well as "non-relativity" into deeper quantitative knowledge about analytical model. These new approaches given in this paper is exoteric in framework and can be enriched with additional new models. In this way, some professional data mining and knowledge discovery cab be fulfilled to aim at some specific professional fields. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Data mining

Controlled terms: Algorithms - Decision tables - Information technology -

Mathematical transformations - Relativity - Time series - Two dimensional

Uncontrolled terms: Correlativity - Data mining and knowledge discovery -

Dynamic data - Making decision - Mining algorithms - Model set - Noise

disturbance - Non-stationary time series - Professional fields - Qualitative knowledge
- Quantitative knowledge - Relative coefficients

Classification code: 723 Computer Software, Data Handling and Applications - 903
Information Science - 921 Mathematics - 921.3 Mathematical Transformations - 922.2
Mathematical Statistics - 931.5 Gravitation, Relativity and String Theory

DOI: 10.4028/www.scientific.net/AMM.263-266.1844

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130515976014

Title: Model of ink quantity control based on colorimetry system

Authors: Jiang, Lei¹ ; Zhou, Shisheng¹ ; Cui, Ying¹/蒋磊;周世生;崔颖

Author affiliation:

1 Institute of Printing and Packaging Engineering, Xi'an University of Technology, China

Corresponding author: Jiang, L. (jiangleiinfo@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 262

Monograph title: Advances in Printing and Packaging Technologies

Issue date: 2013

Publication year: 2013

Pages: 258-262

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855720

Document type: Conference article (CA)

Conference name: 2nd China Academic Conference on Printing and Packaging, CACPP 2012

Conference date: October 19, 2012 - October 20, 2012

Conference location: Beijing, China

Conference code: 95114

Sponsor: China Academy of Printing Technology; Beijing Institute of Graphic Communication;
Green Packing Branch of CSES; School of Printing and Packaging; Xi'an University of Technology;
Et al.

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670,
Germany

Abstract: In the offset printing process, the ink quantity control in the ink zone, color and ink quantity transformation algorithm and the establishment of database, are all based on principle of density measurement. With the establishment and wide spread use of the standard ISO12647-2 for offset, colorimetric measurement is becoming a tendency. By experimental research, this article analyses the relationship between ink thickness and colorimetric value($L^*a^*b^*$) by regression method, determines the best ink quantity parameter, establishes the model of ink quantity controlling based on colorimetry system. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8
Main heading: Color
Controlled terms: Colorimeters - Colorimetry
Uncontrolled terms: Colorimetric measurement - Experimental research -
Printing process - Quantity control - Regression method - Transformation algorithm -
Wide spreads
Classification code: 741.1 Light/Optics - 941.3 Optical Instruments - 941.4 Optical
Variables Measurements
DOI: 10.4028/www.scientific.net/AMM.262.258
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130515953752
Title: Study on solid-liquid interface morphology simulation method and control
parameters of Cz-Si under multi-stream coupled environment
Authors: Jiang, Lei1 ; Liu, Ding1 ; Zhao, Yue1 ; Liu, Zhi-Shang1/姜雷;刘丁;赵跃;刘志尚
Author affiliation:
1 National United Crystal Growth Equipment and System Integration Engineering Research
Center, Xi'an University of Technology, Xi'an 710048, China
Corresponding author: Jiang, L. (jjyyeng@gmail.com)
Source title: Rengong Jingti Xuebao/Journal of Synthetic Crystals
Abbreviated source title: Rengong Jingti Xuebao
Volume: 41
Issue: 6
Issue date: December 2012
Publication year: 2012
Pages: 1762-1767
Language: Chinese
ISSN: 1000985X
CODEN: RJXUEN
Document type: Journal article (JA)
Publisher: Chinese Ceramic Society, Baiwanzhuang, Beijing, 100831, China
Abstract: The problem of solid-liquid interface morphology which plays an important role in
crystal growth is a moving boundary. Whereas coupled with melt convection especially directed
with forced convection caused by crystal rotation, moving boundary problem is composed of
factors that contain third-party coupling in Cz-Si system. Based on FVM, an iterative solution
method is proposed under multi-stream coupled environment through simulation to solid-liquid
interface morphology and an analysis method is given to research on crystal rotation impact on
interface morphology in this paper. Different from the most simulation results, this paper
compared simulation results with the true interface morphology which is obtained by quick
lift-off method in practice. By comparing the test, simulation results consistent test well.
Number of references: 15
Main heading: Iterative methods
Controlled terms: Crystal growth - Crystal orientation - Morphology - Silicon

Uncontrolled terms: Analysis method - Control parameters - Coupled environment - Crystal rotations - Czochralski silicon - Interface morphologies - Iteration method - Iterative solutions - Lift-off methods - Melt convection - Moving boundaries - Moving boundary problems - Multi-stream - Simulation methods - Solid-liquid interface morphology

Classification code: 712.1.1 Single Element Semiconducting Materials - 921.6 Numerical Methods - 933.1.1 Crystal Lattice - 933.1.2 Crystal Growth - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130415932136

Title: The relationship between viscosity and electrical conductivity of CaF₂-SiO₂-Al₂O₃-CaO-MgO slag system

Authors: Jiantao, Ju^{1, 2} ; Zhenlin, Lu¹ ; Zhiyuan, Jiao² ; Jun, Yang² ; Zhaohui, Zhang²/巨建涛吕振林;;;

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Metallurgical Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China

Corresponding author: Jiantao, J. (jujiantao_0033@163.com)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 724

Monograph title: Eco-Materials Processing and Design XIII

Issue date: 2012

Publication year: 2012

Pages: 460-463

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037854396

Document type: Conference article (CA)

Conference name: 13th International Symposium on Eco-Materials Processing and Design, ISEPD 2012

Conference date: January 7, 2012 - January 10, 2012

Conference location: Guilin, China

Conference code: 93066

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The relationship between the viscosity and the electrical conductivity of CaF₂-SiO₂-Al₂O₃-CaO-MgO slag system was deduced through theoretical calculation and experiment. The experiment was designed by quadratic orthogonal rotary regression method. The slag viscosity and conductivity were measured at 1600°C, and the constant (C) was calculated.

The calculating model between each component mass fraction and constant C was performed, and the stability of calculating model was also verified by representative slag. The results showed that the calculating constant (C) of regression model is in good agreement with experimental values. Thus, the relationship between refining slag viscosity and conductivity using the formulae $\frac{\eta}{C} = C$ at certain temperature is feasible. © (2012) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Viscosity

Controlled terms: Aluminum - Electric conductivity - Experiments - Regression analysis - Slags

Uncontrolled terms: CaF₂-SiO₂-Al₂O₃-CaO-MgO - Calculating model - Electrical conductivity - Experimental values - Mass fraction - Quadratic orthogonal rotary regression - Refining slag - Regression method - Regression model - Slag system - Slag viscosity - Theoretical calculations

Classification code: 901.3 Engineering Research - 701.1 Electricity: Basic Concepts and Phenomena - 631.1 Fluid Flow, General - 922.2 Mathematical Statistics - 541.1 Aluminum - 412 Concrete - 406 Highway Engineering - 413 Insulating Materials

DOI: 10.4028/www.scientific.net/MSF.724.460

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130415927579

Title: Algorithm of wavelet texture segmentation based on geometrically regularity

Authors: Jin, Haiyan¹ ; Li, Shuai¹ ; Wang, Bingbo¹/金海燕;李帅;王冰冰

Author affiliation:

1 Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Jin, H. (jinhaiyan@xaut.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 7

Issue: 1

Issue date: January 15, 2013

Publication year: 2013

Pages: 99-106

Language: English

ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Aim at the characters of texture image, this paper uses wavelet transform to extract eight features of each pixel, and then takes the optimal geometrically regular directions of local area as another feature taking advantage of the geometric flow idea of Bandelet transform. In terms of those features fuzzy Cmean clustering analysis is applied. Experiments demonstrate

the validity of this proposed method.

Number of references: 12

Main heading: Wavelet transforms

Controlled terms: Digital communication systems - Software engineering

Uncontrolled terms: Bandelet - Fuzzy C mean - Geometric flows -

Orthogonality - Texture image - Texture segmentation - Wavelet texture

Classification code: 716 Telecommunication; Radar, Radio and Television - 717 Optical Communication - 718 Telephone Systems and Related Technologies; Line Communications - 723.1 Computer Programming - 921.3 Mathematical Transformations

DOI: 10.4156/jdcta.vol7.issue1.12

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130415927507

Title: Asset identification and assignment based on complex information system

Authors: Li, He-Hua¹ ; Wei, Wei² ; Wu, Chun-Ling³ ; Shen, Peiyi⁴;;魏巍;;沈沛意

Author affiliation:

1 Institute of Information security technology, Chongqing College of Electronic Engineering, Chongqing, China

2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

3 Chongqing College of Electronic Engineering, Chongqing, China

4 National school of Software, Xidian University, Xi'an 710071, China

Corresponding author: Li, H.-H. (493885444@qq.com)

Source title: International Journal of Advancements in Computing Technology

Abbreviated source title: Intl. J. Adv. Comput. Technolog.

Volume: 5

Issue: 1

Issue date: January 15, 2013

Publication year: 2013

Pages: 362-368

Language: English

ISSN: 20058039

E-ISSN: 22339337

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: In the process of information system risk assessment, the main work includes: asset assessment, threat assessment and vulnerability assessment. Assets assessment is the identification and determination of the three basic attributes of assets -- the confidentiality, integrity, availability, damage to information system caused by the impact and severity of a process. This paper introduces how to identify assets and assets of the assignment, provides for complex information system for the classification of assets, the modular division and asset identification, as well as the evaluation results, for risk assessment research and implementation provides a reference case.

Number of references: 11

Main heading: Damage detection

Controlled terms: Information systems - Partial discharges - Risk assessment

Uncontrolled terms: Asset identification - Asset valuation - Complex information

- Evaluation results - Modular division - System risk assessment - Threat assessment
- Vulnerability assessments

Classification code: 421 Strength of Building Materials; Mechanical Properties - 422

Strength of Building Materials; Test Equipment and Methods - 701.1 Electricity: Basic

Concepts and Phenomena - 903.2 Information Dissemination - 922.1 Probability Theory

DOI: 10.4156/ijact.vol5.issue1.40

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20130415940886

Title: Polarization control in the coherent optical detection system

Authors: Li, Tie1 ; Ke, Xizheng2 ; Chen, Juan2 ; Ning, Weigang2/李铁;柯熙政;谌娟;宁伟刚

Author affiliation:

1 Science and Technology on Electromechanical Dynamic Control Laboratory, Xi'an 710065, China

2 The Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Li, T. (litielee@yahoo.com)

Source title: Hongwai yu Jiguang Gongcheng/Infrared and Laser Engineering

Abbreviated source title: Hongwai yu Jiguang Gongcheng Infrared Laser Eng.

Volume: 41

Issue: 11

Issue date: November 2012

Publication year: 2012

Pages: 3069-3074

Language: Chinese

ISSN: 10072276

Document type: Journal article (JA)

Publisher: Chinese Society of Astronautics, P.O. Box 225-32, Tianjin, 300192, China

Abstract: Coherent detection can increase receiver sensitivity, improve system performance in optical communication system. However, due to atmospheric effects, the polarization state of the signal light will be random variation after transmission through the atmosphere, it is difficult to achieve same light polarization of the two beams directly which affects the detection efficiency of the system. A new polarization control method was presented for coherent optical detection system. Based on this structure, a mathematical model was built about the polarization control of coherent optical detection system. The extruded fiber polarization controller was selected as polarization control devices in this program. The simulated annealing algorithm was taken as the system control algorithm and the improved algorithm was used to achieve automatic polarization control. The whole control process used blind search, with no specific parameter changes. Simulation results show that the method is suitable for coherent optical

communication to achieve polarization control.

Number of references: 11

Main heading: Polarization

Controlled terms: Algorithms - Mathematical models - Optical communication

Uncontrolled terms: Atmospheric effects - Blind searches - Coherent detection

- Coherent optical communications - Coherent optical detection - Control process -

Detection efficiency - Parameter changes - Polarization control - Polarization control

devices - Polarization controllers - Polarization state - Random variation -

Receiver sensitivity - Signal light - Simulated annealing algorithms - Two beams

Classification code: 711.1 Electromagnetic Waves in Different Media - 717.1 Optical

Communication Systems - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130515971436

Title: Research on the feature selection techniques used in text classification

Authors: Li, Yan1 ; Chen, Chungang2/李言;

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 School of Human Settlement and Civil Engineering, Xi'an Jiaotong University, Xi'an, China

Corresponding author: Li, Y.

Source title: Proceedings - 2012 9th International Conference on Fuzzy Systems and

Knowledge Discovery, FSKD 2012

Abbreviated source title: Proc. - Int. Conf. Fuzzy Syst. Knowl. Discov., FSKD

Monograph title: Proceedings - 2012 9th International Conference on Fuzzy Systems and

Knowledge Discovery, FSKD 2012

Issue date: 2012

Publication year: 2012

Pages: 725-729

Article number: 6234223

Language: English

ISBN-13: 9781467300223

Document type: Conference article (CA)

Conference name: 2012 9th International Conference on Fuzzy Systems and Knowledge

Discovery, FSKD 2012

Conference date: May 29, 2012 - May 31, 2012

Conference location: Chongqing, China

Conference code: 95177

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC

20036-4928, United States

Abstract: With the ever-increasing number of digital documents, the ability to automatically classify those documents both quickly and accurately is becoming more critical and difficult. A text classification system for Chinese documents is developed in this paper. A HTF-WDF algorithm is proposed for feature selection. Different from other feature selection algorithms, this method

considers the effect of term frequency. Using the idea of fuzzy feature, the terms with high term frequency (HTF) are distinguished and appended to the feature list. The features which can represent the topic of the documents are picked out according to the weighted document frequencies (WDF), which can avoid the problems of the traditional document frequency (DF) method. Then the Support Vector Machine (SVM) is used to training the classifier. The proposed algorithm is verified by representative Chinese documents. The experiment results manifest the superiority of the proposed algorithm to the traditional DF algorithm. © 2012 IEEE.

Number of references: 10

Main heading: Algorithms

Controlled terms: Classification (of information) - Feature extraction - Fuzzy systems - Learning systems - Support vector machines

Uncontrolled terms: Chinese documents - Digital Documents - Document frequency - Feature selection algorithm - Fuzzy features - Selection techniques - Term Frequency - Text classification - Text classification systems

Classification code: 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 723 Computer Software, Data Handling and Applications - 961 Systems Science

DOI: 10.1109/FSKD.2012.6234223

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20130515975698

Title: Path planning for mobile robot with clonal selection algorithm

Authors: Li, Yi1 ; Song, Zhen-Hui1 ; Zhao, Li1, 2;;赵理

Author affiliation:

1 Shijiazhuang Vocational Technology Institute, Shijiazhuang 050000, China

2 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Li, Y. (llyi_sjz@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

Pages: 2943-2946

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Aiming at the problem of path planning for a mobile robot, an oriented clonal selection algorithm is proposed. Firstly, the static environment was expressed by a map with nodes and links. Secondly, the locations of target and obstacles were defined. Thirdly, an oriented mutation operator was used to accelerate the evolutionary progress. In this way, we can find an optimal solution with proposed oriented clonal algorithm. Experiment results demonstrate that the algorithm is simple, effective, to solve the problem of robot path planning in a static environment. © (2013) Trans Tech Publications, Switzerland.

Number of references: 4

Main heading: Motion planning

Controlled terms: Algorithms - Civil engineering - Mobile robots

Uncontrolled terms: Clonal algorithm - Clonal selection algorithms - Evolutionary progress - Mutation operators - Nodes and links - Optimal solutions - Robot path-planning - Static environment

Classification code: 409 Civil Engineering, General - 723 Computer Software, Data Handling and Applications - 723.4 Artificial Intelligence - 731.5 Robotics - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMM.256-259.2943

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20130415932768

Title: Photo response non-uniformity correction of high dynamic range video system

Authors: Liang, Lei1 ; Yu, NingMei1 ; Li, JianWei1/;余宁梅;

Author affiliation:

1 Electronic Department, Xi'an University of Technology, China

Corresponding author: Liang, L. (lianglei8568@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 263-266

Issue: PART 1

Monograph title: Information Technology Applications in Industry

Issue date: 2013

Publication year: 2013

Pages: 2524-2529

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855744

Document type: Conference article (CA)

Conference name: 2012 International Conference on Information Technology and

Management Innovation, ICITMI 2012

Conference date: November 10, 2012 - November 11, 2012

Conference location: Guangzhou, China

Conference code: 95052

Sponsor: Information Science School of Guangdong; University of Business Studies

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In order to solve the problem of the photo response non-uniformity (PRNU) for High Dynamic Range (HDR) video system, this paper discusses the causes of the problem and the common solution, and then proposed a new non-uniformity correction approach based on the reference source for HDR video system. This approach use high-pass filter to calibration image in Frequency domain to get the correction matrix of one level light conditions at first. And then performs an inverse Fourier transform to the spatial domain. Finally calculate the difference between the correction matrix and the target image to obtain the corrected results. The experimental result indicates that the approach has good effect on dealing with non-uniformity of the HDR images and the definition has been greatly improved. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Information technology

Controlled terms: Frequency domain analysis - High pass filters

Uncontrolled terms: Correction matrix - Frequency domains - Frequency-domain filtering - HDR - HDR image - HDR video - High dynamic range - High dynamic range video - Inverse Fourier transforms - Light conditions - Nonuniformity - Nonuniformity correction - Photo response non-uniformity - PRNU - Reference source - Spatial domains - Target images - Video systems

Classification code: 703.1.1 Electric Network Analysis - 703.2 Electric Filters - 903 Information Science

DOI: 10.4028/www.scientific.net/AMM.263-266.2524

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20130515975376

Title: Combination of geological radar and video surveillance in the tunnel geological prediction

Authors: Liu, Bo¹ ; Li, Ning¹ ; Lv, Gao¹ / 李宁;

Author affiliation:

1 Institution of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liu, B. (251561659@qq.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013
 Pages: 1206-1211
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855652
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012
 Conference date: October 27, 2012 - October 28, 2012
 Conference location: Guilin, China
 Conference code: 95112
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: This paper presents the combination method between geological radar and video surveillance in the tunnel geological prediction, in case the randomness in judgment for the target body prone in the current geological advanced prediction. In order to improve the accuracy, this method conducts geological advanced prediction by comprehensive of geological radar, geological and construction information. In order to verify the effect of this method, we conducted a field trial in the Yululing tunnel. The field trial results are very well. And the accuracy of geological advanced prediction has been improved. This method reached the expected target for the accuracy which we want to improve of geological advanced prediction. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 12
 Main heading: Forecasting
 Controlled terms: Civil engineering - Ground penetrating radar systems - Monitoring - Radar - Security systems
 Uncontrolled terms: Combination method - Construction information - Field trial - Geological predictions - Geological radar - Tunnel projects - Video surveillance
 Classification code: 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 921 Mathematics - 716.2 Radar Systems and Equipment - 409 Civil Engineering, General - 914.1 Accidents and Accident Prevention
 DOI: 10.4028/www.scientific.net/AMM.256-259.1206
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 17.
 Accession number: 20130515975216
 Title: Study on stress and deformation of earth-rock cofferdam and concrete cutoff wall on deep overburden
 Authors: Liu, Hai-wei¹ ; Dang, Fa-ning¹ ; Yi, Min²;/党发宁;
 Author affiliation:
 1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shann Xi Province Institute of Water Resource and Electric Power Investigation and Design, China

Corresponding author: Liu, H.-W. (lhw_heavy@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

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E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The earth-rock cofferdam on deep overburden is the main study object. The cofferdam filling and dam excavation process were numerical simulated using FEM code ANSYS. Main research focused on stress and deformation characteristic of cofferdam and concrete cutoff wall during completion and excavation process. Analysis showed that displacements of cofferdam and cutoff wall distribute well in x, y, z directions with acceptable magnitude, stress characteristic values are less than design standard. The results indicate that cofferdam and cutoff wall are safe and stable both in construction and operation. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Cofferdams

Controlled terms: Civil engineering - Deformation - Design - Excavation - Finite element method

Uncontrolled terms: Concrete cutoff wall - Cutoff wall - Deep overburden - Design standard - Earth-rock - Stress and deformation - Stress characteristics - Z-directions

Classification code: 405.2 Construction Methods - 408 Structural Design - 409 Civil Engineering, General - 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 921.6 Numerical Methods

DOI: 10.4028/www.scientific.net/AMM.256-259.383

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

18.

Accession number: 20130515974875

Title: 2D simulation of effects of position of baffles on the removal rate of solids in a sedimentation tank

Authors: Liu, Y.L.1 ; Zhang, P.1 ; Wei, W.L.1/刘玉玲;张沛;魏文礼

Author affiliation:

1 Institute of Hydraulic Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Liu, Y. L. (liuyuling@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 253-255

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Monograph title: Sustainable Development of Urban Infrastructure

Issue date: 2013

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Pages: 861-864

Language: English

ISSN: 16609336

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ISBN-13: 9783037855645

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this paper, we use solid-liquid two-phase mixture model and the k-E turbulence model to numerically simulate the effects of the position of baffles on the removal rate of solids in a sedimentation tank. The PISO algorithm is used to decouple velocity and pressure. The distribution of sludge concentration on different cross-sections is obtained by the proposed model. © (2013) Trans Tech Publications, Switzerland.

Number of references: 2

Main heading: Settling tanks

Controlled terms: Civil engineering - Turbulence models

Uncontrolled terms: 2D simulations - Hydraulic characteristic - PISO algorithm -

Position of baffles - Removal rate - Simulation - Sludge concentration - Solid-liquid - Two-phase mixture models

Classification code: 409 Civil Engineering, General - 443.1 Atmospheric Properties - 445.1 Water Treatment Techniques

DOI: 10.4028/www.scientific.net/AMM.253-255.861

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

19.

Accession number: 20130515975631

Title: 2D simulation of flow field of horizontal sedimentation tank

Authors: Liu, Y.L.1 ; Lv, B.1 ; Zhang, P.1 ; Wei, W.L.1/刘玉玲;吕彬;张沛;魏文礼

Author affiliation:

1 Institute of Hydraulic Engineering, Xian University of Technology, Xi'an, China

Corresponding author: Wei, W. L. (wwl_p@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

Pages: 2598-2601

Language: English

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E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this paper, we use 3D time-averaged equations and the 3D k-E turbulence model to numerically simulate the flow in a horizontal sedimentation tank. The PISO algorithm is used to couple velocity and pressure. The results show that the model can provide a reference in designing sedimentation tanks. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Settling tanks

Controlled terms: Civil engineering - Computer simulation - Three dimensional computer graphics - Turbulence - Turbulence models

Uncontrolled terms: 2D simulations - Horizontal sedimentation tank - PISO algorithm - Time-averaged equations

Classification code: 409 Civil Engineering, General - 443.1 Atmospheric Properties - 445.1 Water Treatment Techniques - 723.5 Computer Applications

DOI: 10.4028/www.scientific.net/AMM.256-259.2598

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20.

Accession number: 20130515975635

Title: Simulation of a free surface flow over a vertical weir
 Authors: Liu, Y.L.1 ; Bai, Y.1/刘玉玲;
 Author affiliation:
 1 Institute of Hydraulic Engineering, Xi'an University of Technology, Xi'an, China
 Corresponding author: Liu, Y. L. (liuyuling_2@126.com)
 Source title: Applied Mechanics and Materials
 Abbreviated source title: Appl. Mech. Mater.
 Volume: 256-259
 Issue: PART 1
 Monograph title: Advances in Civil Engineering II
 Issue date: 2013
 Publication year: 2013
 Pages: 2616-2620
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855652
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012
 Conference date: October 27, 2012 - October 28, 2012
 Conference location: Guilin, China
 Conference code: 95112
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: In this paper the numerical simulation of a free surface flow over a vertical weir with in turns of a scour pool and a small hump weir is presented. Since in this case few of calculative examples adds scour pool and small hump weir in the model, it is meaningful to compute this example using a numerical software which is named Fluent 6.3. The numerical method used consists of Navier-Stokes turbulence solver and k-E model together with a VOF method and PISO algorithm in pave meshes. Thus, the sketches of flow fields on each typical time point and velocity distributions on each section on 16s are provided to describe flow field accurately. A very good quantitative consequence which accords with hydraulics theoretical analysis has been obtained. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 7
 Main heading: Weirs
 Controlled terms: Civil engineering - Computer simulation - Flow fields - Hydraulic structures - Lakes - Turbulence
 Uncontrolled terms: Free-surface flow - Navier-Stokes turbulence - Numerical software - PISO algorithm - Quantitative consequences - Time points - VOF method - VOF model
 Classification code: 723.5 Computer Applications - 631.1 Fluid Flow, General - 611 Hydroelectric and Tidal Power Plants - 441.1 Dams - 441 Dams and Reservoirs; Hydro Development - 409 Civil Engineering, General - 407 Maritime and Port Structures; Rivers

and Other Waterways

DOI: 10.4028/www.scientific.net/AMM.256-259.2616

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

21.

Accession number: 20130415932691

Title: Failure mode recognition clustering algorithm based on manifold learning

Authors: Lou, Zhigang¹ ; Liu, Hongzhao¹/ 娄志刚;刘宏昭

Author affiliation:

1 The Faculty of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Lou, Z. (louzg@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 263-266

Issue: PART 1

Monograph title: Information Technology Applications in Industry

Issue date: 2013

Publication year: 2013

Pages: 2126-2130

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E-ISSN: 16627482

ISBN-13: 9783037855744

Document type: Conference article (CA)

Conference name: 2012 International Conference on Information Technology and Management Innovation, ICITMI 2012

Conference date: November 10, 2012 - November 11, 2012

Conference location: Guangzhou, China

Conference code: 95052

Sponsor: Information Science School of Guangdong; University of Business Studies

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Manifold learning is a new unsupervised learning method. Its main purpose is to find the inherent law of generated data sets. Be used for high dimensional nonlinear fault samples for learning, in order to identify embedded in high dimensional data space in the low dimensional manifold, can be effective data found the essential characteristics of fault identification. In many types of fault, sometimes often failure and normal operation of the equipment of some operation similar to misjudgment, such as oil pipeline transportation process, pipeline regulating pump, adjustable valve, pump switch, normal operation and pipeline leakage fault condition similar spectral characteristics, thus easy for pipeline leakage cause mistakes. This paper uses the manifold learning algorithm for fault pattern clustering recognition, and through experiments on the algorithm is evaluated. © (2013) Trans Tech Publications, Switzerland.

Number of references: 5

Main heading: Clustering algorithms
Controlled terms: Information technology - Learning algorithms - Noise abatement
- Pattern recognition
Uncontrolled terms: Data sets - Essential characteristic - Fault identifications -
Fault patterns - High-dimensional - High-dimensional data space - Laplacian
eigenmaps - Low-dimensional manifolds - Manifold learning - Manifold learning
algorithm - Mode recognition - Nonlinear faults - Normal operations - Oil
pipelines - Pipeline leakage - Regulating pumps - Spectral characteristics -
Unsupervised learning method
Classification code: 716 Telecommunication; Radar, Radio and Television - 721 Computer
Circuits and Logic Elements - 723 Computer Software, Data Handling and Applications -
751.4 Acoustic Noise - 903 Information Science
DOI: 10.4028/www.scientific.net/AMM.263-266.2126
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
22.
Accession number: 20130415932110
Title: Effect of impact angle on erosion wear behaviours of SiCp/cast iron surface
composite
Authors: Lu, Zhenlin1 ; Jin, Han1 ; Zhou, Yongxin1 ; Xie, Hui1/吕振林;;周永新;谢辉
Author affiliation:
1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048,
China
Corresponding author: Lu, Z. (lvzl2002@xaut.edu.cn)
Source title: Materials Science Forum
Abbreviated source title: Mater. Sci. Forum
Volume: 724
Monograph title: Eco-Materials Processing and Design XIII
Issue date: 2012
Publication year: 2012
Pages: 339-342
Language: English
ISSN: 02555476
CODEN: MSFOEP
ISBN-13: 9783037854396
Document type: Conference article (CA)
Conference name: 13th International Symposium on Eco-Materials Processing and Design,
ISEPD 2012
Conference date: January 7, 2012 - January 10, 2012
Conference location: Guilin, China
Conference code: 93066
Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635,
Switzerland
Abstract: The slurry erosion wear performances of the SiCp/cast iron surface composite,

which was prepared by infiltrating molten cast iron into SiC particles preforms, were studied on self-made slurry jet erosion wear machine. The results show that the erosion wear rate of the SiCp/cast iron surface composite would be the lowest at impact angle of 30°, and the largest at impact angle of 60°. The erosion wear rate increases gradually when impact angle is changed from 30° to 60°, and then decreased with increasing the impact angle. The erosion wear mechanism of the SiCp/cast iron surface composite is dominated by cutting and grooving at low impact angle, and by fatigue spalling and cutting at high impact angle. For the gray cast iron, the erosion wear rate of would be increased gradually with the increase of impact angle, reaching the peak value at 90°, which indicates the typical characteristics of brittle material in slurry erosion wear process. © (2012) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Wear of materials

Controlled terms: Cast iron - Silicon carbide - Tribology

Uncontrolled terms: Erosion wear - Gray cast iron - Grey cast iron - High impact - Impact angles - Iron surface - Peak values - SiC particles - Slurry erosion - Surface composites

Classification code: 421 Strength of Building Materials; Mechanical Properties - 545.2

Iron Alloys - 804.2 Inorganic Compounds - 931 Classical Physics; Quantum Theory;

Relativity - 951 Materials Science

DOI: 10.4028/www.scientific.net/MSF.724.339

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

23.

Accession number: 20130515975977

Title: The theory of the density-based gravure spot-color matching

Authors: Luo, Rubai1, 2 ; Jiang, Nan1, 2 ; Zhou, Shisheng1, 2 ; Zhang, Yan1, 2/罗如柏; 蒋楠; 周世生;

Author affiliation:

1 School of Printing and Packing Engineering, Xi'an University of Technology, Xi'an, China

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Corresponding author: Luo, R. (luorubai@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 262

Monograph title: Advances in Printing and Packaging Technologies

Issue date: 2013

Publication year: 2013

Pages: 69-73

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855720

Document type: Conference article (CA)

Conference name: 2nd China Academic Conference on Printing and Packaging, CACPP 2012
 Conference date: October 19, 2012 - October 20, 2012
 Conference location: Beijing, China
 Conference code: 95114
 Sponsor: China Academy of Printing Technology; Beijing Institute of Graphic Communication; Green Packing Branch of CSES; School of Printing and Packaging; Xi'an University of Technology; Et al.
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: Spot-color is widely used in modern package printing technology. In order to use of computer techniques in calculation the formula of spot-color, an algorithm of formula calculation for the gravure spot-color was proposed in this paper. Firstly, the spot-color was divided into ten color areas based on the theory of Munsell color system, and in IGT gravure testing system, the color proofs were printed for each color area, according to different ratio of the cyan, magenta, yellow and white ink, in order to gain the data of mathematics modeling. Then, the algorithm of matching spot-color based on Masking Equation was provided, after measuring and analyzing of the proofs. Moreover, the results of experiment in blue color area show that the algorithm, which was proposed, has good accuracy of matching spot-color. Finally, using the C++ programming language and MySQL database, the prototype computer aided gravure spot-color matching system was developed, the results of operation show that the software is available. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 7
 Main heading: Color matching
 Controlled terms: Algorithms - Color - Computer software - Printing - Software engineering
 Uncontrolled terms: Color area - Color proofs - Computer aided - Computer techniques - Density-based - Gravure printing - Masking equation - Matching system - Mathematics modeling - Munsell color system - MySQL database - Package printing technology - Spot-color matching - Testing systems
 Classification code: 723 Computer Software, Data Handling and Applications - 723.1 Computer Programming - 741.1 Light/Optics - 745.1 Printing - 801 Chemistry - 803 Chemical Agents and Basic Industrial Chemicals
 DOI: 10.4028/www.scientific.net/AMM.262.69
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 24.
 Accession number: 20130415941254
 Title: Study on corrosion behavior of hot extruded Mg-1Ca-0.5Mn alloy in sodium chloride water solution
 Authors: Ma, Ying^{1, 2}; Zhang, Zhongming¹; Wang, Ting¹; Guo, Yang¹; Xu, Chunjie¹;/张忠明;;徐春杰
 Author affiliation:
 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China

2 Department of Mechanical Engineering, Xi'an Aerotechnical College, Xi'an, Shaanxi, 710077, China

Corresponding author: Ma, Y. (rainmy905@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 268

Issue: PART 1

Monograph title: Materials, Mechanical Engineering and Manufacture

Issue date: 2013

Publication year: 2013

Pages: 330-335

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855799

Document type: Conference article (CA)

Conference name: 2nd International Conference on Applied Mechanics, Materials and Manufacturing, ICAMMM 2012

Conference date: November 17, 2012 - November 18, 2012

Conference location: Changsha, China

Conference code: 95054

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The corrosion behavior of extruded Mg-1Ca-0.5Mn (weight percent) alloy in 0.9% sodium chloride water solution was investigated by using mass-loss measurement and electrochemical method. The results show that filiform corrosion and pitting corrosion occur during immersion corrosion process. The average corrosion rate gradually decreases as immersion time increases; it is 0.53 mm/a after immersion at 37° for 11 days. The corrosion current density i_{corr} and corrosion potential E_{corr} of the alloy is 0.042 mA/cm² and -1.60V, respectively. The instantaneous corrosion rate is 0.88 mm/a. Mg-1Ca-0.5Mn alloy erodes by continuous dissolution. The corrosion product Mg(OH)₂ layer surrounding the magnesium alloy can decrease the corrosion rate. The erosion process of the magnesium alloy is controlled by cathodic diffusion. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Corrosion rate

Controlled terms: Calcium - Corrosion - Corrosive effects - Magnesium alloys - Manganese - Manganese removal (water treatment) - Manufacture - Pitting - Sodium chloride

Uncontrolled terms: Continuous dissolution - Corrosion behavior - Corrosion current densities - Corrosion potentials - Corrosion process - Corrosion products - Electrochemical methods - Erosion process - Filiform corrosion - Immersion time - Mass loss - Mass-loss measurement - NaCl solution - Polarization curves - Water solutions - Weight percent

Classification code: 445.1 Water Treatment Techniques - 537.1 Heat Treatment

Processes - 539.1 Metals Corrosion - 543.2 Manganese and Alloys - 549.2 Alkaline Earth Metals - 804.2 Inorganic Compounds

DOI: 10.4028/www.scientific.net/AMM.268-270.330

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

25.

Accession number: 20130415941261

Title: Microstructure and high temperature mechanical properties of Mg-1Si-1Y alloy

Authors: Ma, Ying^{1, 2}; Zhang, Zhongming¹; Lv, Zhenlin¹; Xu, Chunjie¹; 张忠明; 吕振林; 徐春杰

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China

2 Department of Mechanical Engineering, Xi'an Aeronautical University, Xi'an, Shaanxi, 710077, China

Corresponding author: Ma, Y. (rainmy905@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 268

Issue: PART 1

Monograph title: Materials, Mechanical Engineering and Manufacture

Issue date: 2013

Publication year: 2013

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E-ISSN: 16627482

ISBN-13: 9783037855799

Document type: Conference article (CA)

Conference name: 2nd International Conference on Applied Mechanics, Materials and Manufacturing, ICAMMM 2012

Conference date: November 17, 2012 - November 18, 2012

Conference location: Changsha, China

Conference code: 95054

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Mg-1Si alloy doped with 1%Y was prepared by in-situ reaction synthesis. The effect of hot extrusion on the microstructure and elevated-temperature mechanical properties of the alloy was studied. The microstructures were analyzed by optical microscopy, scanning electron microscopy with energy dispersive X-ray spectroscopy and X-ray diffractometry. The results show that as-cast Mg-1Si-1Y alloy consists of dendritic α -Mg phase, eutectic needle-like Mg₂Si phase and Mg_{24+x}Y₅ phase precipitated from α -Mg, Mg₂Si can be modified and refined by yttrium, and α -Mg grains can be refined by dynamic recrystallization occurred in hot extrusion process. The tensile strength and elongation of the alloy at ambient temperature are improved prominently by

hot extrusion. The tensile strength and elongation of the extruded alloy is 185.3MPa and 24.3% at 120°. The improved elevated-temperature properties of the alloy are ascribed to the fine-grained strengthening and dispersion strengthening from Mg₂Si and Mg₂₄+xY₅ particles. © (2013) Trans Tech Publications, Switzerland.

Number of references: 15

Main heading: Silicon alloys

Controlled terms: Alloying - Cerium alloys - Dispersions - Dynamic recrystallization - Extrusion dies - Magnesium - Manufacture - Mechanical properties - Microstructure - Optical microscopy - Scanning electron microscopy - Silicon - Synthesis (chemical) - Tensile strength - X ray diffraction analysis - X ray spectroscopy - Yttrium - Yttrium alloys

Uncontrolled terms: As-cast - Dispersion strengthening - Energy dispersive X ray spectroscopy - Extruded alloys - High temperature mechanical properties - Hot extrusion - Hot extrusion process - In-situ reaction synthesis - Needle-like

Classification code: 951 Materials Science - 933 Solid State Physics - 816.2 Plants and Machinery for Plastics and Other Polymers - 802.2 Chemical Reactions - 801 Chemistry - 741.1 Light/Optics - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 549.2 Alkaline Earth Metals - 547.2 Rare Earth Metals - 537.1 Heat Treatment Processes - 531.1 Metallurgy - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.4028/www.scientific.net/AMM.268-270.365

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

26.

Accession number: 20130515976402

Title: Color texture recognition methods base on GLCM-Gabor and application in print detection

Authors: Ren, Linghui¹ ; Zhang, Haiyan² ; Guo, Kaiming²/任玲辉;张海燕;郭凯明

Author affiliation:

1 The Faculty of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, China

2 The Faculty of Printing and Packaging Engineering, Xi'an University of Technology, China

Corresponding author: Zhang, H. (hyzhang@xaut.edu.cn)

Source title: International Journal of Advancements in Computing Technology

Abbreviated source title: Intl. J. Adv. Comput. Technolog.

Volume: 4

Issue: 21

Issue date: 2012

Publication year: 2012

Pages: 567-573

Language: English

ISSN: 20058039

E-ISSN: 22339337

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: The color texture is an important information in the image recognition. In this paper, we put forward a new method to extract the color image texture. Firstly, we choose the suitable color space for improve recognition rate of color texture. Secondly, we combination GLCM(Gray Level Cooccurrence Matrix)with Gabor filtering to extract the color image texture. Finally, we used the SVM(Support Vector Machine)classifier to verify the correct of the method we proposed, the method can distinguish real and false between RMB, Tests show that the accuracy is 98.18%.

Number of references: 10

Main heading: Textures

Controlled terms: Color - Color image processing - Image enhancement - Image recognition - Image texture - Support vector machines

Uncontrolled terms: Color images - Color space - Color textures - Gabor - Gabor filtering - GLCM - Gray level co-occurrence matrix - Recognition rates - SVM(support vector machine) - Texture recognition

Classification code: 723 Computer Software, Data Handling and Applications - 723.2

Data Processing and Image Processing - 741.1 Light/Optics - 933 Solid State Physics

DOI: 10.4156/ijact.vol4.issue21.67

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

27.

Accession number: 20130515975235

Title: The development of a one-parameter model for the soil-water characteristic curve in loess gully regions

Authors: Song, XiaoYu1 ; Li, HuaiYou2 ; Shi, WenJuan1/宋孝玉;李怀有;史文娟

Author affiliation:

1 Northwest Key Laboratory of Water Resource and Environment Ecology, Ministry of Education, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 Xifeng Experiment Station of soil and water conservation, Yellow River conservancy committee, Xifeng, Gansu 745000, China

Corresponding author: Song, X. (songxy@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

Pages: 488-493

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)
 Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012
 Conference date: October 27, 2012 - October 28, 2012
 Conference location: Guilin, China
 Conference code: 95112
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: It is important to understand soil hydraulic properties in order to predict the movement of water and solutes such as pollutants. To this end, 55 soil samples were collected from different areas of the Nanxiaohegou basin and used to generate soil-water characteristic curves. These were then fitted using the power-, exponential-, and logarithmic versions of the Gardner model; the logarithmic model yielded the best fit overall. The logarithmic model was further simplified to yield a one-parameter model for estimating the soil-water characteristic curve within the basin, and it was demonstrated that the value of the single parameter is dependent on the topography and usage of the land. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 20
 Main heading: Geologic models
 Controlled terms: Civil engineering - Soils - Topography - Water pollution
 Uncontrolled terms: Best fit - Characteristic parameter - Land use pattern - Logarithmic models - Single parameter - Soil hydraulic properties - Soil sample - Soil-water characteristic curve
 Classification code: 409 Civil Engineering, General - 453 Water Pollution - 481.1 Geology - 483.1 Soils and Soil Mechanics - 951 Materials Science
 DOI: 10.4028/www.scientific.net/AMM.256-259.488
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 28.
 Accession number: 20130415927590
 Title: An efficient interest point detector based on double pyramids structure
 Authors: Sui, Liansheng¹ ; Xin, Meiting¹ ; Liu, Lijin¹/隋连升;;
 Author affiliation:
 1 Xi'an University of Technology, China
 Corresponding author: Sui, L. (liudua2010@gmail.com)
 Source title: International Journal of Digital Content Technology and its Applications
 Abbreviated source title: Int. J. Digit. Content Technol. Appl.
 Volume: 7
 Issue: 1
 Issue date: January 15, 2013
 Publication year: 2013
 Pages: 195-203
 Language: English
 ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: In this paper we propose an efficient interest points detection algorithm that is invariant to scale, rotation and translation as well as robust to illumination changes and limited changes of viewpoint. First, we compute one pyramid representation in which every layer is used to detect the initial points with the Harris detector. Second, we compute another pyramid representation based on the difference of Gaussians in which the stable points are determined with the local maximum over adjacent layers. For a local structure in an image, the proposed algorithm can detect interest points in a certain range of scales to represent this local feature, and the localizations of these points are slightly different. Thus, the algorithm can obtain the high number of interest points and increase the probability of correct matches between the gradual transformation images of the same scene. We present a comparative evaluation between the proposed algorithm and the Harris-Laplace detector, and show the proposed algorithm not only obtains high matching scores but also consumes less time for different scenes.

Number of references: 21

Main heading: Image matching

Controlled terms: Algorithms - Detectors

Uncontrolled terms: Adjacent layers - Comparative evaluations - Detection algorithm - Difference of Gaussians - Gradual transformations - Harris detector - Illumination changes - Initial point - Interest point - Local feature - Local maximum - Local structure - Matching score - Point detectors - Stable points

Classification code: 723 Computer Software, Data Handling and Applications - 741 Light, Optics and Optical Devices - 914 Safety Engineering - 921 Mathematics

DOI: 10.4156/jdcta.vol7.issue1.23

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

29.

Accession number: 20130415932109

Title: Effect of Ti, Al and Cu addition on structural evolution and phase constitution of FeCoNi system equimolar alloys

Authors: Wang, Xiao1 ; Xie, Hui1 ; Jia, Lei1 ; Lu, Zhenlin2/王晓;谢辉;贾磊;吕振林

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Materials Science and Engineering, Henan University of Science and Technology, Luoyang 471003, China

Corresponding author: Wang, X. (xautwangxiao@163.com)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 724

Monograph title: Eco-Materials Processing and Design XIII

Issue date: 2012

Publication year: 2012
 Pages: 335-338
 Language: English
 ISSN: 02555476
 CODEN: MSFOEP
 ISBN-13: 9783037854396
 Document type: Conference article (CA)
 Conference name: 13th International Symposium on Eco-Materials Processing and Design, ISEPD 2012
 Conference date: January 7, 2012 - January 10, 2012
 Conference location: Guilin, China
 Conference code: 93066
 Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
 Abstract: FeCoNi system equimolar alloys were fabricated by a vacuum arc melting. The phase constitution of FeCoNi system alloys was determined by XRD analysis and the microstructure was observed by OM. The comprehensive atomic radius δ , the mixing enthalpy ΔH_{mix} and the mixing entropy ΔS_{mix} of alloys were also calculated according to relevant equations. The results show that the addition of Ti, Al and Cu has an obvious influence on the microstructure and phase constitution of FeCoNi system equimolar alloys. Single Ti addition resulted in almost entire solid solution with a typical dendrite growth character and a little unknown phase. However, further addition of Al, Cu or Al+Cu into the FeCoNiTi equimolar alloys led to the occurrence of an entire solution phase with dendrite, coarse dendrite, and rosette dendrite respectively. Such a phenomena suggested that the mixing entropy caused by the increase of components number rather than the comprehensive atomic radius between the elements or the mixing enthalpy of the alloy systems might be responsible for the formation of almost entire solid solution in FeCoNi system equimolar alloys. © (2012) Trans Tech Publications, Switzerland.
 Number of references: 11
 Main heading: Titanium alloys
 Controlled terms: Alloys - Aluminum - Cerium alloys - Enthalpy - Microstructure - Mixing - Solid solutions - Vacuum applications
 Uncontrolled terms: Addition of Al - Alloy system - Atomic radius - Compound - Cu addition - Dendrite growth - Equi-molar alloys - Mixing enthalpy - Mixing entropy - Phase constitution - Solution phase - Structural evolution - Ti addition - Vacuum arc melting - XRD analysis
 Classification code: 802.3 Chemical Operations - 641.1 Thermodynamics - 633.1 Vacuum Applications - 933 Solid State Physics - 547.2 Rare Earth Metals - 541.1 Aluminum - 531.1 Metallurgy - 542.3 Titanium and Alloys
 DOI: 10.4028/www.scientific.net/MSF.724.335
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 30.
 Accession number: 20130515971344

Title: A quick value reduction algorithm of rough set
 Authors: Wang, Xiaofan¹ ; Baoshu Wang²;
 Author affiliation:
 1 School of Computer Science and Technology, Xi'an University of Technology, Xi'an, 710048, China
 2 School of Computer Science and Technology, Xidian University, Xian, 710071, China
 Corresponding author: Wang, X. (wangxfok@xaut.edu.cn)
 Source title: Proceedings - 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012
 Abbreviated source title: Proc. - Int. Conf. Fuzzy Syst. Knowl. Discov., FSKD
 Monograph title: Proceedings - 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012
 Issue date: 2012
 Publication year: 2012
 Pages: 216-219
 Article number: 6233931
 Language: English
 ISBN-13: 9781467300223
 Document type: Conference article (CA)
 Conference name: 2012 9th International Conference on Fuzzy Systems and Knowledge Discovery, FSKD 2012
 Conference date: May 29, 2012 - May 31, 2012
 Conference location: Chongqing, China
 Conference code: 95177
 Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
 Abstract: In order to get a value reduction quickly, this paper puts forwards a new algorithm of value reduction based on attribute-value-tree model in attribute order and proves it's correctness. A attribute reduction and value reduction can be got quickly at the same time from a discrete table in this algorithm. The computational complexity of reduction is changed to $O(U2C)$ where U and C are the number of objects and attributes. It is fit to process large data and validated to improve the efficiency by tests. © 2012 IEEE.
 Number of references: 21
 Main heading: Rough set theory
 Controlled terms: Algorithms - Decision tables - Forestry - Fuzzy systems - Trees (mathematics)
 Uncontrolled terms: Attribute reduction - Attribute-Value-Tree - Large data - Rough set - Value reduction
 Classification code: 723 Computer Software, Data Handling and Applications - 723.1 Computer Programming - 821.0 Woodlands and Forestry - 921 Mathematics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory
 DOI: 10.1109/FSKD.2012.6233931
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

31.

Accession number: 20130515975636

Title: Simulation of 3D flood waves by gas-liquid two-phase model

Authors: Wei, W.L.1 ; Zhao, X.J.1 ; Liu, Y.L.1/魏文礼;赵小军;刘玉玲

Author affiliation:

1 Institute of Hydraulic Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Wei, W. L. (wei_wenli@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

Pages: 2621-2624

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: This paper is concerned with a gas-liquid two-phase model combining with the k-E turbulent model for numerical simulation of 3D flood waves due to complete or partial dam-break. The flow equations are solved with the finite volume method and solved by the pressure-correction algorithm of the SIMPLE-type. The free fluid surface is simulated by the the volume of fluid(VOF) method. The comparisons with other numerical results show that the proposed method is accurate, reliable and effective in simulation of dam-break flood waves. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Three dimensional computer graphics

Controlled terms: Civil engineering - Computer simulation - Finite volume method
- Floods - Liquids - Numerical methods - Three dimensional - Turbulence

Uncontrolled terms: Dam-breaks - Flood waves - Flow equations - Free fluids
- Gas liquids - Numerical results - Turbulent models - Two-phase model - VOF
model - Volume of fluid method

Classification code: 409 Civil Engineering, General - 443.1 Atmospheric Properties -
723.5 Computer Applications - 914.1 Accidents and Accident Prevention - 921.6

Numerical Methods - 931.2 Physical Properties of Gases, Liquids and Solids

DOI: 10.4028/www.scientific.net/AMM.256-259.2621

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

32.

Accession number: 20130515975632

Title: 3D simulation of flow in an aeration tank with two pipelines by a two-fluid model

Authors: Wei, W.L.1 ; Zhao, X.J.1 ; Liu, Y.L.1/魏文礼;赵小军;刘玉玲

Author affiliation:

1 Institute of Hydraulic Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Wei, W. L. (wei_wenli@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 256-259

Issue: PART 1

Monograph title: Advances in Civil Engineering II

Issue date: 2013

Publication year: 2013

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E-ISSN: 16627482

ISBN-13: 9783037855652

Document type: Conference article (CA)

Conference name: 2nd International Conference on Civil Engineering and Transportation, ICCET 2012

Conference date: October 27, 2012 - October 28, 2012

Conference location: Guilin, China

Conference code: 95112

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this paper, a numerical two-fluid flow model combining with the Realizable k-E turbulent model for compressible viscous fluid is presented for the computation of flow characteristics in an aeration tank; and the equations are solved with the finite volume method. A multigrid technique based on the full approximation storage (FAS) scheme is employed to accelerate the numerical convergence. The numerical results for velocity and turbulent kinetic energy distribution in the aeration tank are obtained. It is shown that the Computational Fluid Dynamics (CFD) is a valuable tool to analyze the interaction of flow field and aeration. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Computational fluid dynamics

Controlled terms: Civil engineering - Finite volume method - Hydrodynamics - Kinetics - Numerical methods - Sewage lagoons - Sewage tanks - Three dimensional computer graphics

Uncontrolled terms: 3D simulations - Aeration tanks - CFD simulations -

Compressible viscous fluids - Flow characteristic - Full approximation storages -
Multigrid technique - Numerical convergence - Numerical results - Oxidation ditch
- Turbulent kinetic energy distribution - Turbulent models - Two fluid model -
Two-fluid flow

Classification code: 409 Civil Engineering, General - 452.2 Sewage Treatment - 631.2
Hydrodynamics - 723.5 Computer Applications - 921.6 Numerical Methods - 931

Classical Physics; Quantum Theory; Relativity

DOI: 10.4028/www.scientific.net/AMM.256-259.2602

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

33.

Accession number: 20130415927649

Title: Numerical simulation of the gas-solid flow behavior in A spouted bed

Authors: Wei, Wei1 ; Fan, Jinhe2, 3 ; Fan, Haihong2, 3 ; Xu, Delong2, 3/魏巍;

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of technology, Xi'an 710048,
China

2 Institute of Powder Engineering, College of Materials and Mineral Resources, Xi'an Univ. of
Arch. and Tech, Xi'an 710055, China

3 State Key Laboratory of Architecture Science and Technology in West (XAUAT), Xi'an 710055,
China

Corresponding author: Wei, W. (weiwei@xaut.edu.cn)

Source title: International Journal of Digital Content Technology and its Applications

Abbreviated source title: Int. J. Digit. Content Technol. Appl.

Volume: 7

Issue: 1

Issue date: January 15, 2013

Publication year: 2013

Pages: 719-728

Language: English

ISSN: 19759339

E-ISSN: 22339310

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg
3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: The paper presents a computational study of the gas-solid flow in a
three-dimensional spouted bed by a combined approach of discrete element method and
computational fluid dynamics (DEM-CFD), in which the motion of individual particles was
obtained by solving Newton's second law of motion and gas flow by the Navier-Stokes equation
based on the concept of local average. The coupling between the discrete particle and continuum
gas was achieved by applying the principle of Newton's third law of motion. It was shown that
the motion of particles was forming a distinct circulation between center zone and boundary
zone of the 3D spouted bed in macro, and there was a stagnant zone near the bottom of the bed
in which the particle velocity is almost zero near the wall, they do not move anywhere. The

region was 7% approximately of initial steady bed.

Number of references: 22

Main heading: Finite difference method

Controlled terms: Computational fluid dynamics - Computer simulation - Flow of solids - Navier Stokes equations

Uncontrolled terms: Boundary zones - Computational studies - Gas-solid flows - Local average - Motion of individual - Motion of particles - Newton's second law - Newton's third law of motion - Particle velocities - Spouted bed - Stagnant zones

Classification code: 723.5 Computer Applications - 921.6 Numerical Methods - 931.1 Mechanics

DOI: 10.4156/jdcta.vol7.issue1.82

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

34.

Accession number: 20130515973633

Title: Fuzzy control strategy of powershift transmission of tractor

Authors: Xi, Zhiqiang^{1, 2} ; Zhou, Zhili² ; Li, Yan^{1/};李言

Author affiliation:

1 Xi'an University of Technology, Xi'an, 710048, China

2 Henan University of Science and Technology, Luoyang, 471003, China

Corresponding author: Xi, Z. (sseekk@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 241-244

Monograph title: Industrial Instrumentation and Control Systems

Issue date: 2013

Publication year: 2013

Pages: 1959-1963

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855461

Document type: Conference article (CA)

Conference name: 2012 International Conference on Measurement, Instrumentation and Automation, ICMIA 2012

Conference date: September 15, 2012 - September 16, 2012

Conference location: Guangzhou, China

Conference code: 95105

Sponsor: Queensland University of Technology; Korea Maritime University; Hong Kong Industrial Technology Research Centre; Inha University, Korea

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Due to the complex working conditions of tractor and its frequent load fluctuation, it is difficult to analyze shift schedule through the traditional approach of building the

mathematical model of power train. The paper will applied fuzzy control theory to the shift schedule. The control rules is determined based on the different operating states of tractor. Slip rate which is a important indicator to reflect tractor operation will be introduced as control parameters to research the control strategy of tractor's powershift automatic transmisson. The simulation result shows that the method can effectively avoid shift circulation and reduce the shift frequency, which improve the dynamic performance and fuel economy of tractors. © (2013) Trans Tech Publications, Switzerland.

Number of references: 7

Main heading: Tractors (truck)

Controlled terms: Fuel economy - Fuzzy control - Materials handling equipment - Mathematical models - Tractors (agricultural)

Uncontrolled terms: Control parameters - Control rules - Control strategies - Dynamic performance - Fuzzy control strategy - Load fluctuations - Operating state - Powershift transmissions - Shift schedule - Slip rates

Classification code: 521 Fuel Combustion and Flame Research - 663.1 Heavy Duty Motor Vehicles - 691.1 Materials Handling Equipment - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMM.241-244.1959

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

35.

Accession number: 20130415941888

Title: Study on optical dot gain model based on point spread and probability methods

Authors: Xu, Jun Fei¹ ; Xu, Jinlin¹ ; Xu, Yongchi^{2/;;}

Author affiliation:

1 Research Center of Printing Technology, Zhejiang Industry and Trade Vocational College, 17 Fudong Road, Wenzhou 325003, China

2 School of Printing and Packing Engineering, Xi'an University of Technology, 5 South Jinhua Road, Xi'an 710048, China

Corresponding author: Xu, J. F. (feijunxu@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 271

Issue: PART 1

Monograph title: Frontiers of Manufacturing and Design Science III

Issue date: 2013

Publication year: 2013

Pages: 1434-1440

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855782

Document type: Conference article (CA)

Conference name: 3rd International Conference on Frontiers of Manufacturing and Design Science, ICFMD 2012

Conference date: December 11, 2012 - December 13, 2012

Conference location: Hong kong

Conference code: 95055

Sponsor: Control Eng. Inf. Sci. Res. Assoc.; International Frontiers of science; and technology Research Association; National Chin-Yi University of Technology; Integrated Research Center for Green Living Techniques; Trans Tech Publication

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Optical dot gain is the key point of halftone reconstruction study, and has always been a meaningful topic of theoretical study. The Yule-Nielsen formula is by far the most widely used research method of optical dot gain. However, solving the Yule-Nielsen parameter n remains a difficult problem. This paper disregards solving for the Yule-Nielsen parameter n , analyzes the light scattering and osmotic effect of halftone presswork, deduces the exact expressions of blank area of presswork, and determines the reflectivity of the dot part and halftone presswork according to the point spread function and probability method. Furthermore, this paper analyzes how the optical dot gain depends on the dot area coverage of presswork, ink layer transmittivity, and paper-based spectral reflectivity. In addition, a new algorithm model for optical dot gain is established. By employing the Clapper-Yule Model to calculate the spectral transmittance of printing ink and comparing it with the practical measured spectral reflectivity of the halftone presswork proof, the accuracy of the model established in this paper is fully verified. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Probability

Controlled terms: Design - Manufacture - Optical transfer function - Reflection

Uncontrolled terms: Algorithm model - Clapper-Yule model - Keypoints - Murray-davis method - Optical dot gain - Probability methods - Probability models - research methods - Spectral reflectivity - Spectral transmittance - Theoretical study - Transmittivity

Classification code: 408 Structural Design - 537.1 Heat Treatment Processes - 741.1 Light/Optics - 922.1 Probability Theory

DOI: 10.4028/www.scientific.net/AMM.271-272.1434

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

36.

Accession number: 20130515974226

Title: Preparation of $\text{Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3\text{-Ni}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4$ bilayer thin films and their magnetic and ferroelectric properties

Authors: Yan, Fuxue¹ ; Zhao, Gaoyang¹ ; Song, Na¹ ; Chen, Yuanqing¹/严富学;赵高扬;宋娜;陈源清

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yan, F. (yanfuxue@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.
 Volume: 248
 Monograph title: Mechanical Materials and Manufacturing Engineering II
 Issue date: 2013
 Publication year: 2013
 Pages: 212-217
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855560
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Mechanical Materials and Manufacturing Engineering, ICMME 2012
 Conference date: October 5, 2012 - October 6, 2012
 Conference location: Dalian, China
 Conference code: 95108
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: $\text{Ni}_{0.5}\text{Zn}_{0.5}\text{Fe}_2\text{O}_4\text{-Pb}(\text{Zr}_{0.52}\text{Ti}_{0.48})\text{O}_3$ (NZFO-PZT) composite films were prepared using sol-gel method on Si (100) substrate with different bilayer structures, namely, the NZFO/PZT (NP) and the PZT/NZFO (PN). Their structure, magnetic and ferroelectric properties were characterized by X-ray diffractometer (XRD), vibration sample magnetometer (VSM) and ferroelectric testing unit. Both the NP and the PN films exhibit coexistence of magnetic and ferroelectric properties. The overlapping sequence has much influence on the electrical properties. Whereas, such an overlapping structure of the films has slightly effect on its magnetic properties. The NP structured composite film is more suitable to get a promising magnetoelectric coupling. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 17
 Main heading: Ferroelectric films
 Controlled terms: Composite films - Electric properties - Ferroelectric materials - Ferroelectricity - Film preparation - Industrial engineering - Lead - Magnetic properties - Sol-gel process - Zinc - Zirconium
 Uncontrolled terms: Bi-layer structure - Bilayer thin films - Ferroelectric property - Magnetic - Magnetoelectric couplings - Multiferroic film - PZT - Si (100) substrate - Vibration sample magnetometers - X ray diffractometers
 Classification code: 813.1 Coating Techniques - 714.2 Semiconductor Devices and Integrated Circuits - 712.1 Semiconducting Materials - 708.1 Dielectric Materials - 912.1 Industrial Engineering - 701.2 Magnetism: Basic Concepts and Phenomena - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 546.3 Zinc and Alloys - 546.1 Lead and Alloys - 701.1 Electricity: Basic Concepts and Phenomena
 DOI: 10.4028/www.scientific.net/AMM.248.212
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20130415932584
 Title: XML keyword search algorithm based on level-traverse encoding
 Authors: Yao, Quanzhu1 ; Tian, Bing1 ; He, Wangyun2/姚全珠;;何望云
 Author affiliation:
 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China
 2 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an, China
 Corresponding author: Yao, Q. (qzyao@xaut.edu.cn)
 Source title: Applied Mechanics and Materials
 Abbreviated source title: Appl. Mech. Mater.
 Volume: 263-266
 Issue: PART 1
 Monograph title: Information Technology Applications in Industry
 Issue date: 2013
 Publication year: 2013
 Pages: 1553-1558
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855744
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Information Technology and Management Innovation, ICITMI 2012
 Conference date: November 10, 2012 - November 11, 2012
 Conference location: Guangzhou, China
 Conference code: 95052
 Sponsor: Information Science School of Guangdong; University of Business Studies
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: For XML documents, existing keyword retrieval methods encode each node with Dewey encoding, comparing Dewey encodings part by part is necessary in LCA computation. When the depth of XML is large, lots of LCA computations will affect the performance of keyword search. In this paper we propose a novel labeling method called Level-TRaverse (LTR) encoding, combine with the definition of the result set based on Exclusive Lowest Common Ancestor (ELCA), design a query Bottom-Up Level Algorithm(BULA).The experiments demonstrate this method improves the efficiency and the veracity of XML keyword retrieval. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 7
 Main heading: XML
 Controlled terms: Algorithms - Encoding (symbols) - Information technology - Life cycle - Search engines
 Uncontrolled terms: BULA - ELCA - Encodings - Keyword retrieval - Keyword search - Labeling methods - Level algorithms - Lowest common ancestors
 Classification code: 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 903 Information Science - 913.1 Production

Engineering

DOI: 10.4028/www.scientific.net/AMM.263-266.1553

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

38.

Accession number: 20130415931610

Title: Effects of welding heat input on properties of joints of X100 pipeline steel

Authors: Zhang, Min¹ ; Yang, Liang¹ ; Li, Jihong¹/张敏;杨亮;李继红

Author affiliation:

1 College of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Cailiao Yanjiu Xuebao/Chinese Journal of Materials Research

Abbreviated source title: Cailiao Yanjiu Xuebao

Volume: 26

Issue: 6

Issue date: December 2012

Publication year: 2012

Pages: 567-571

Language: Chinese

ISSN: 10053093

CODEN: CYXUEV

Document type: Journal article (JA)

Publisher: Chinese Journal of Materials Research, 72 Wenhua Road, Shenyang, 110015, China

Abstract: The effect of welding heat input on the microstructure and properties of X100 pipeline steel was studied. The results show that with the increase of heat input, the strength and toughness of X100 pipeline steel decrease due to the decrease of acicular ferrite in the weld zone and the coarser grains in HAZ. The smaller heat input can reduce the width, and increase the hardness in HAZ. The impact energy and the shear area of joints decrease with increasing heat input. The impact fracture is quasi-cleavage fracture. The microstructure of weld zone is mainly made up of acicular ferrite and granular bainitic which could bring excellent strength and toughness. The microstructure of HAZ has larger changes because of difference of the cooling rate under different welding heat input. © Copyright.

Number of references: 9

Main heading: Welding

Controlled terms: Brittle fracture - Ferrite - Heat affected zone - Microstructure - Steel pipe

Uncontrolled terms: Acicular ferrite - Coarser grains - Cooling rates - Heat input - Impact energy - Impact fracture - Metallic material - Microstructure and properties - Properties - Quasi cleavage fracture - Shear area - Strength and toughness - Weld zone - Welding heat input - X100 pipelines

Classification code: 421 Strength of Building Materials; Mechanical Properties - 538.2

Welding - 545.3 Steel - 933 Solid State Physics - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

39.

Accession number: 20130515976046

Title: Study on the technical conditions of old newspaper(ONP)/
recycled-polypropylene(rPP) composites

Authors: Zhang, Xiaolin1 ; Bo, Xiangfeng2/张晓林;

Author affiliation:

1 School of Printing and Packaging Engineering, Xi'an University of Technology, China

2 School of Mechanical and Electrical Engineering, Xi'an University of Architecture and
Technology, China

Corresponding author: Zhang, X. (zhangxiaolin@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 262

Monograph title: Advances in Printing and Packaging Technologies

Issue date: 2013

Publication year: 2013

Pages: 418-421

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855720

Document type: Conference article (CA)

Conference name: 2nd China Academic Conference on Printing and Packaging, CACPP 2012

Conference date: October 19, 2012 - October 20, 2012

Conference location: Beijing, China

Conference code: 95114

Sponsor: China Academy of Printing Technology; Beijing Institute of Graphic Communication;
Green Packing Branch of CSES; School of Printing and Packaging; Xi'an University of Technology;
Et al.

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670,
Germany

Abstract: Use of resource-rich wastepaper/recycled plastics as raw materials in the
production of wood-plastic composites(WPC) can alleviate the shortage of wood resources,
reduce pollution and has a attractive prospect. In this paper, old newspaper fiber
(ONPF)/recycled-polypropylene (rPP) Wood-Plastics Composite (WPC) was prepared by means of
mixing processing and compression molding. The effects of technical conditions on the
mechanical properties of WPC were investigated. The structure of composite was characterized
by means of FTIR and SEM. The results show that, Wastepaper and waste-PP can be used as raw
materials for preparation of WPC. The suitable preparation process for wastepaper/rPP
composites was: wastepaper fiber 20%, blending temperature 175 ° C, blending time 15min,
molding pressure 12MPa, molding temperature 175°C and molding time 10min. In these
conditions, tensile strength and flexural strength of wastepaper/rPP composites are 23.6MPa and

28.8MPa respectively, increased by 20.9% and 12.6% compared to those of rPP matrix. The elongation at break of WPC is 10.6%, and the flexural modulus is 1328.9MPa, increased by 7.7% compared to those of rPP matrix. The structure analysis found that there is no chemical reaction between the fibers and the matrix. The research results have important practical significance in the field of printing and packaging waste recycling and utilization, environmental protection and energy saving. © (2013) Trans Tech Publications, Switzerland.

Number of references: 7

Main heading: Polypropylenes

Controlled terms: Blending - Compression molding - Elastomers - Mechanical properties - Printing - Recycling - Thermoplastics - Waste paper - Wood products

Uncontrolled terms: Blending temperature - Elongation at break - Flexural modulus - FTIR - Molding pressure - Molding temperature - Molding time - Old newspapers - Packaging waste - Preparation process - Recycled-plastic - Research results - Resource-Rich - Structure analysis - Structure of composites - Technical conditions - Wastepaper fibers - Wood plastic composite - Wood resources - Wood-plastic composites - Wood-plastics composite

Classification code: 818.2 Elastomers - 816.1 Processing of Plastics and Other Polymers - 815.1.1 Organic Polymers - 951 Materials Science - 811.2 Wood and Wood Products - 745.1 Printing - 452.3 Industrial Wastes - 802.3 Chemical Operations

DOI: 10.4028/www.scientific.net/AMM.262.418

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

40.

Accession number: 20130515975974

Title: Research on reconstruction of spectral reflectance based on principal component analysis

Authors: Zhang, Yana¹ ; Zhou, Shisheng¹/张亚娜;周世生

Author affiliation:

1 Institute of Printing and Packaging Engineering, Xi'an University of Technology, China

Corresponding author: Zhang, Y. (zhangyan1992@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 262

Monograph title: Advances in Printing and Packaging Technologies

Issue date: 2013

Publication year: 2013

Pages: 53-58

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855720

Document type: Conference article (CA)

Conference name: 2nd China Academic Conference on Printing and Packaging, CACPP 2012

Conference date: October 19, 2012 - October 20, 2012

Conference location: Beijing, China

Conference code: 95114

Sponsor: China Academy of Printing Technology; Beijing Institute of Graphic Communication; Green Packing Branch of CSES; School of Printing and Packaging; Xi'an University of Technology; Et al.

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Traditional color reproduction technology based on the Metamerism principle, the disadvantage is that different observer condition leads to different color appearance. To fulfill the color consistency, the spectrum reflectance of the object color sample need to be reconstructed. The principal component analysis makes use of the linear combination of a few principal components to reconstruct the spectral reflectance of sample. This paper analyzes the 31*31 matrix of Munsell spectral data by the principle component analyze method and achieves the principal component for spectrum reflectance. The numbers of principal components are identified as six by discussing the variance contribution rate. Spectral reconstruction of four Munsell testing samples makes use of first six principal components, which has met the accuracy requirements. Research shows that the reconstruction of spectral accuracy decreased when training samples and testing samples belong to the different database. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Principal component analysis

Controlled terms: Color - Printing - Reflection

Uncontrolled terms: Color consistency - Color reproduction - Contribution rate - Data sets - Linear combinations - Object colors - Principal Components - Principle component - Spectral accuracy - Spectral data - Spectral reconstruction - Spectral reflectances - Spectrum reflectance - Testing samples - Training sample

Classification code: 741.1 Light/Optics - 745.1 Printing - 922.2 Mathematical Statistics

DOI: 10.4028/www.scientific.net/AMM.262.53

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

41.

Accession number: 20130415941251

Title: Microstructures and damping capacities of az91d-0.7%si alloy

Authors: Zhang, Zhongming¹ ; Huang, Zhenghua² ; Ma, Ying¹ ; Xu, Chunjie¹/张忠明;;徐春杰

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Corresponding author: Zhang, Z. (zmzhang@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.
 Volume: 268
 Issue: PART 1
 Monograph title: Materials, Mechanical Engineering and Manufacture
 Issue date: 2013
 Publication year: 2013
 Pages: 316-320
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855799
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Applied Mechanics, Materials and Manufacturing, ICAMMM 2012
 Conference date: November 17, 2012 - November 18, 2012
 Conference location: Changsha, China
 Conference code: 95054
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: Microstructure of as-cast AZ91D alloy doped with 0.7wt% silicon was investigated, the damping capacity of the alloy was measured by cantilever beam technique, and the damping mechanism was also analyzed. The results show that after addition 0.7%Si into AZ91D alloy, the dendritic grains are refined, and Chinese script Mg₂Si phase forms in the interdendritic areas. The damping capacities of the alloy are improved by Si addition, and increase with increasing of strain amplitude. The damping behavior of the alloy is mainly resulted from dislocation movement, and can be explained by the theory of Granato and Lu"cke. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 14
 Main heading: Silicon alloys
 Controlled terms: Alloying - Cerium alloys - Cladding (coating) - Damping - Manufacture - Microstructure - Silicon
 Uncontrolled terms: As-cast - AZ91D alloy - Chinese script - Damping behaviors - Damping capacity - Damping mechanisms - Dendritic grains - Dislocation movement - Interdendritic areas - Phase forms - Si addition - Si alloys - Strain amplitude
 Classification code: 933 Solid State Physics - 931.1 Mechanics - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 951 Materials Science - 547.2 Rare Earth Metals - 535.1 Metal Rolling - 531.1 Metallurgy - 537.1 Heat Treatment Processes
 DOI: 10.4028/www.scientific.net/AMM.268-270.316
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 42.
 Accession number: 20130515976035

Title: A fault diagnosis method for the roller-marks in offset printing machine based on texture recognition

Authors: Zhuofei, Xu1 ; Haiyan, Zhang2 ; Linghui, Ren1/徐卓飞;张海燕;任玲辉

Author affiliation:

1 The Faculty of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, China

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Corresponding author: Zhuofei, X. (xzf_34216606@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 262

Monograph title: Advances in Printing and Packaging Technologies

Issue date: 2013

Publication year: 2013

Pages: 361-366

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ISBN-13: 9783037855720

Document type: Conference article (CA)

Conference name: 2nd China Academic Conference on Printing and Packaging, CACPP 2012

Conference date: October 19, 2012 - October 20, 2012

Conference location: Beijing, China

Conference code: 95114

Sponsor: China Academy of Printing Technology; Beijing Institute of Graphic Communication; Green Packing Branch of CSES; School of Printing and Packaging; Xi'an University of Technology; Et al.

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Roller-mark is a common problem in offset printing and its solution method is important for printing. A new detecting method of texture analysis was given in this paper. In this study, printing image was acquired with high-speed CCD. Compared the difference between printing image and standard image, a defective image was obtained. Then the reason of roller-marks was given by the texture recognition of defect image. Finally, experiments were taken to prove the feasibility and effectiveness of this new method for the roller-marks diagnosis in the offset printing machine. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Rollers (machine components)

Controlled terms: Failure analysis - Image processing - Printing presses - Textures

Uncontrolled terms: Defect images - Detecting methods - Fault diagnosis method - High-speed CCD - Offset printing machines - Printing images - Roller-marks - Solution methods - Standard images - Texture analysis - Texture recognition

Classification code: 421 Strength of Building Materials; Mechanical Properties - 601.2

Machine Components - 741 Light, Optics and Optical Devices - 745.1.1 Printing
Equipment - 921 Mathematics - 933 Solid State Physics
DOI: 10.4028/www.scientific.net/AMM.262.361
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

20130215 新增 18 条

1.

Accession number: 20130615999705
Title: Effect of additives on microstructure and properties of novel AgTiB₂ composite
Authors: Chen, Mei¹ ; Wang, Xianhui¹ ; Zou, Juntao¹ ; Liang, Shuhua¹/陈梅;王献辉;邹军涛;
梁淑华
Author affiliation:
1 Xi'an University of Technology, Xi'an 710048, China
Corresponding author: Chen, M. (chenmeixaut@163.com)
Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering
Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng
Volume: 41
Issue: 12
Issue date: December 2012
Publication year: 2012
Pages: 2228-2232
Language: Chinese
ISSN: 1002185X
CODEN: XJCGEA
Document type: Journal article (JA)
Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014,
China
Abstract: AgTiB₂ contact material with different additives was prepared by high-energy
milling and powder metallurgy. The effects of WO₃, Al, Bi₂O₃ addition and WO₃+Bi₂O₃, WO₃+Al
composite additions on the microstructure and properties of AgTiB₂ were investigated. The
morphology of milled powders and the microstructure of AgTiB₂ composite with different
additives were characterized by scanning electron microscope equipped with energy disperse
spectroscopy, and the hardness and electrical conductivity were tested. The results show that
WO₃single addition and WO₃+Al, WO₃+Bi₂O₃ composite additions can improve the densification
of AgTiB₂. In comparison with those of Ag/TiB₂ composite without any additive, the hardness
and electrical conductivity of the AgTiB₂ composite materials with WO₃ single addition and
WO₃+Al composite addition are increased, whose hardness values are 1253 and 1022 MPa
respectively, and the electrical conductivity are 78.62%IACS and 14.91%IACS, respectively. The
hardness and electrical conductivity of the AgTiB₂ composite materials with Bi₂O₃+WO₃
composite addition are 786 MPa and 16.12%IACS, respectively. © 2012, Northwest Institute for
Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.
Number of references: 20
Main heading: Additives

Controlled terms: Aluminum - Composite materials - Electric conductivity - Hardness - Microstructure - Powder metallurgy - Scanning electron microscopy
Uncontrolled terms: Al composites - Contact material - Electrical conductivity - Hardness values - Microstructure and properties - Milled powders - Scanning Electron Microscope
Classification code: 951 Materials Science - 933 Solid State Physics - 811 Cellulose, Paper and Wood Products - 804 Chemical Products Generally - 803 Chemical Agents and Basic Industrial Chemicals - 741.1 Light/Optics - 701.1 Electricity: Basic Concepts and Phenomena - 541.1 Aluminum - 536 Powder Metallurgy - 421 Strength of Building Materials; Mechanical Properties - 415 Metals, Plastics, Wood and Other Structural Materials
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130615987920

Title: Investigation on osteoblast growth on the modified surface of porous titanium

Authors: Guangsheng, Xu^{1, 2} ; Hongchao, Kou¹ ; Ruolin, Li¹ ; Xianghong, Liu² ; Tingli, Lu³ ; Qi, Li⁴ ; Lian, Zhou^{1/;;;;}

Author affiliation:

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Corresponding author: Guangsheng, X. (xuguangshengss@163.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 647

Monograph title: Biomaterial and Bioengineering

Issue date: 2013

Publication year: 2013

Pages: 98-103

Language: English

ISSN: 10226680

ISBN-13: 9783037855973

Document type: Conference article (CA)

Conference name: 2012 International Conference on Biomaterial and Bioengineering, ICBB 2012

Conference date: December 19, 2012 - December 20, 2012

Conference location: Hong kong

Conference code: 95254

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Three methods have been used to modify the porous titanium surface, which is the alkali heat treatment, alkali heat treatment + SBF solution soak and alkali heat treatment + precalcified + SBF solution soak. The morphology of different surfaces was observed by scanning electron microscopy (SEM). The MC3T3-E1 osteoblast cell was cultured on the modified and unmodified surface of porous titanium with 3days and 7days, the morphology of osteoblast adhesion and growth on different surface was observed. The results showed that osteoblast adhere on the modified and unmodified surface of the porous titanium. Osteoblast on AHS and HA modified surface can grow and spread, but it cannot grow and spread on unmodified and AH modified surface of the porous titanium. Osteoblast can grow across the different titanium fibers of on HA modified surface of porous titanium. Osteoblast on the HA surface has the very good biological suitability, which is beneficial to the combination of bone tissue and porous titanium.

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Number of references: 13

Main heading: Titanium

Controlled terms: Biomaterials - Heat treatment - Morphology - Osteoblasts - Scanning electron microscopy - Surface treatment - Tissue

Uncontrolled terms: Bone tissue - In-vitro - MC3T3-E1 - Modified surfaces - Osteoblast adhesion - Osteoblast cells - Osteoblast growth - Porous titanium - SBF solution - Suitability

Classification code: 931.2 Physical Properties of Gases, Liquids and Solids - 931 Classical Physics; Quantum Theory; Relativity - 802 Chemical Apparatus and Plants; Unit Operations; Unit Processes - 542.3 Titanium and Alloys - 951 Materials Science - 539 Metals Corrosion and Protection; Metal Plating - 462.5 Biomaterials (including synthetics) - 461.9 Biology - 461.2 Biological Materials and Tissue Engineering - 537.1 Heat Treatment Processes

DOI: 10.4028/www.scientific.net/AMR.647.98

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130515972981

Title: Seismic behavior of four-angle-connection steel frame structure with steel plate shear walls

Authors: Guo, Hongchao¹ ; Hao, Jiping² ; Pan, Xiuzhen¹ ; Liu, Jianjun³/郭宏超;郝际平;潘秀珍;刘建军

Author affiliation:

1 Department of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

2 Department of Civil Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China

3 China Railway Southwest Research Institute Co. Ltd., Chengdu 611731, China

Corresponding author: Hao, J. (haojiping@xauat.edu.cn)

Source title: Jianzhu Jiegou Xuebao/Journal of Building Structures

Abbreviated source title: Jianzhu Jiegou Xuebao

Volume: 34

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 70-75

Language: Chinese

ISSN: 10006869

CODEN: JJXUD2

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Based on the cyclic loading test, the finite element analysis on the hysteretic behaviors of the semi-rigid composite steel frame with steel plate shear wall was conducted to study the load carrying capacity, hysteretic behavior, stress and deformation development process, energy dissipation mechanism and failure mode. The results of analysis and test indicate that the requirement on the joint ductility is lowered by using infilled panels. The cooperative work between the frame and the shear wall is well. It's an ideal lateral force resisting structural system, which has excellent energy consumption and high safety margin. The finite element simulation of structure stress and deformation development course agrees well with the experimental phenomena. Due to the initial eccentricity, welding residual stress and other reasons, the finite element analysis results of the peak load is close to the test results at elastic stage. The finite element analysis of the peak load is higher than the test results, and the theoretical hysteresis loop is plumper.

Number of references: 7

Main heading: Structural frames

Controlled terms: Curricula - Deformation - Energy dissipation - Energy utilization - Finite element method - Hysteresis - Hysteresis loops - Numerical analysis - Plates (structural components) - Shear walls - Steel construction

Uncontrolled terms: Composite steel - Cooperative works - Cyclic loading test - Development process - Energy dissipation mechanism - Finite element simulations - High safety - Hysteretic behavior - Hysteretic loop - Initial eccentricity - Lateral force - Peak load - Seismic behavior - Semi-rigid - Semirigid connections - Steel frame structures - Steel plate shear walls - Stress and deformation - Structural systems - Welding residual stress

Classification code: 961 Systems Science - 921.6 Numerical Methods - 921

Mathematics - 901.2 Education - 545.3 Steel - 525.4 Energy Losses (industrial and residential) - 525.3 Energy Utilization - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 408.2

Structural Members and Shapes - 402 Buildings and Towers

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130615999747

Title: Back analysis of displacements of Heihe clay core rockfill dam at different stages

Authors: He, Min^{1, 2}; Li, Ning¹; Zhang, Xi-Qian³; Gao, Huan-Huan²/何敏;李宁;张西前;高焕焕

Author affiliation:

- 1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China
- 2 Hydrochina Xibei Engineering Corporation, Xi'an 710065, China
- 3 Heihe Administration Bureau, Xi'an 710061, China

Corresponding author: He, M. (hem@nwh.cn)

Source title: Yantu Lixue/Rock and Soil Mechanics

Abbreviated source title: Rock Soil Mech

Volume: 34

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 259-264

Language: Chinese

ISSN: 10007598

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: The safety evaluation of high earth core rockfill dam through deformation and seepage measurement and analysis is one of most important problem in nowadays soil mechanics at present. Due to the influences of construction method, construction quality and management during and after construction, the real parameters of the dam become quite different from the original designing parameters. So it is of great significance to get real parameters and real running state of the dam based on back analysis in order to evaluate the dam stability exactly and comprehensively. To get the real mechanics parameters of the dam soils, the investigation on stress, deformation and seepage behavior by the in-situ measurement in Heihe clay core rockfill dam in Xi'an are executed based on analysis of the time property and space property. Then the relationship between the deformation and load is built; and a back analysis method for the soil parameters during construction and operation based on the theory of nearly saturated soils using the 3-D finite element simulation is suggested, from which the DUCAN parameters, seepage coefficients and wetting parameters of the core clay of the dam can be determined directly and realistically. And the method proposed is useful for design and back analysis of these type projects.

Number of references: 9

Main heading: Dams

Controlled terms: Deformation - Rock mechanics - Rocks - Seepage - Soil mechanics - Soils - Wetting

Uncontrolled terms: 3D finite-element simulation - Back analysis - Back analysis method - Back analysis of displacements - Clay cores - Construction method - Construction quality - Dam stability - During construction - Earth core - In-situ measurement - Measurement and analysis - Nearly saturated soils - Observed data - Rock-fill dam - Safety evaluations - Seepage coefficient - Soil parameters - Time properties - Wetting parameters

Classification code: 483.1 Soils and Soil Mechanics - 481.1 Geology - 441.1 Dams - 931.2 Physical Properties of Gases, Liquids and Solids - 441 Dams and Reservoirs; Hydro Development - 421 Strength of Building Materials; Mechanical Properties - 407 Maritime

and Port Structures; Rivers and Other Waterways - 422 Strength of Building Materials; Test Equipment and Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20130615997857

Title: A grey-based service reputation model for web of things

Authors: He, Xiu-Qing^{1, 2} ; Wang, Ying-Hui¹;/王映辉

Author affiliation:

1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Computer Science, ShaanXi Normal University, Xi'an, 710062, China

Corresponding author: He, X.-Q. (xiuqing@snnu.edu.cn)

Source title: Journal of Convergence Information Technology

Abbreviated source title: J. Convergence Inf. Technol.

Volume: 8

Issue: 2

Issue date: January 2013

Publication year: 2013

Pages: 685-694

Language: English

ISSN: 19759320

E-ISSN: 22339299

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Service reputation is widely used to evaluate service behavior in Service-Oriented Architecture (SOA) application that is based on service consumer ratings which are subjective personal perception for service performance evaluation. As SOA technologies are reused in Web of Things (WoT) to build service-oriented application for sharing information, cooperating work and integrating WoT into the existing IT system, it is a crucial challenge that evaluate service reputation in WoT without heavy interactive query process while devices in WoT are resources-limited. This work focuses on the research of grey-based representation for service reputation and rating to deal with the uncertainty in WoT, and the service reputation aggregation model with the metrics of rater's rating, personal performance, quality similarity and temporal sensitivity of ratings. The Empirical results show that proposed reputation model can reflect service behavior effectively and efficiently even a certain percentage unfair ratings in the reputation aggregation.

Number of references: 17

Main heading: Consumer behavior

Controlled terms: Information services - Rating - Search engines - Service oriented architecture (SOA) - World Wide Web

Uncontrolled terms: Aggregation model - Grey number - Interactive queries - IT system - Personal perception - Personal performance - Reputation rating -

Service Oriented - Service performance evaluation - Service reputation - Sharing information - Temporal sensitivity - Unfair ratings - Web of things

Classification code: 722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications - 902.2 Codes and Standards - 903.4 Information Services - 931.3 Atomic and Molecular Physics

DOI: 10.4156/jcit.vol8.issue2.82

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130615996676

Title: Study on speed performance of bearing based on self-lubricating C(Cr, N) coatings steel ball

Authors: Jia, Gui-Xi¹ ; Chang, Jia-Dong¹ ; Li, Yan² ; Wang, Ya-Hong¹/贾贵西;常家东;李言;王雅红

Author affiliation:

1 Luoyang Institute of Science and Technology, Luoyang 471023, China

2 School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Jia, G.-X.

Source title: Gongneng Cailiao/Journal of Functional Materials

Abbreviated source title: Gongneng Cailiao

Volume: 43

Issue: SUPPL. 2

Issue date: November 2012

Publication year: 2012

Pages: 209-212

Language: Chinese

ISSN: 10019731

CODEN: GOCAEA

Document type: Journal article (JA)

Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China

Abstract: The self-lubricating C(Cr, N) coatings was deposited on bearing steel ball surface by means of an closed-field unbalanced magnetron sputtering ion plating technique. An 6204 bearing was used for the bearing experimental work. The microstructure and chemical compositions of the coatings were observed and analysed by the scanning electron microscopy (SEM) and transmission electron microscopy (TEM). Its adhesion, hardness, toughness and friction behaviors was tested, and the speed performance and self-lubricating properties of coated bearing and uncoated bearing were also tested by an high-performance bearing testing machine, and also been comparated analysis. The results show that the C(Cr, N) coatings working-layer has better microstructure and comprehensively mechanical properties. And compared to the uncoated bearing, the coatings significantly reduces the value of bearing vibration, the coated bearing greatly improves high speed performance and self-lubricating properties.

Number of references: 13

Main heading: Chromate coatings

Controlled terms: Ball bearings - Ion implantation - Lubrication - Magnetron sputtering - Mechanical properties - Microstructure - Scanning electron microscopy - Transmission electron microscopy

Uncontrolled terms: Bearing steels - Chemical compositions - Closed-field unbalanced magnetron sputtering - Friction behavior - High-speed performance - Ion plating - Self-lubricating - Self-lubricating properties - Speed performance - Steel balls - Testing machine - Transmission electron microscopy tem

Classification code: 951 Materials Science - 933 Solid State Physics - 932.1 High Energy Physics - 813.2 Coating Materials - 741.3 Optical Devices and Systems - 741.1 Light/Optics - 715.1 Electronic Equipment, non-communication - 607.2 Lubrication - 601.2 Machine Components

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130615999677

Title: Nano-composite powder of tungsten coated copper produced by thermo-chemistry co-reduction

Authors: Li, Junqiang¹; Chen, Wenge¹; Tao, Wenjun¹; Shao, Fei¹; Ding, Bingjun²/李君强; 陈文革; 陶文俊; 邵菲; 丁秉均

Author affiliation:

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2 Xi'an Jiaotong University, Xi'an 710049, China

Corresponding author: Li, J. (403627986@qq.com)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 41

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 2091-2094

Language: English

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: Two kinds of copper oxide with different particle sizes and 1.5 μm tungsten trioxide powder were employed to prepare the high-purity CuWO_4 powder. By two stage hydrogen-reduction of the CuWO_4 at 360 and 750 $^\circ\text{C}$ respectively and continuously, nano-composite powder of tungsten coated copper was synthesized. Micro-morphology, crystallization-components and grain-size of the products were investigated by scanning electron microscope (SEM), X-ray diffract meter (XRD) and transmission electric microscope (TEM) and laser particle size analyzer (LPSA) was also applied to measure the particle-size of CuWO_4 . The W

film thickness of nano-composite powder synthesized by smaller-sized CuWO₄ is thinner than that made from bigger-sized CuWO₄. The average particle size of nano-composite powder of tungsten coated copper is about 50 nm under the two-stage hydrogen reduction. © 2012, Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 12

Main heading: Nanocomposite films

Controlled terms: Copper - Hydrogen - Nanocomposites - Particle size -

Particle size analysis - Reduction - Scanning electron microscopy - Tungsten -

Tungsten compounds

Uncontrolled terms: Average particle size - Co-reduction - Coated powders -

High-purity - Hydrogen reduction - Laser particle size analyzer - Nano -

Nano-composite powders - Tungsten trioxide - W-Cu - XRD

Classification code: 943.2 Mechanical Variables Measurements - 933 Solid State Physics

- 804 Chemical Products Generally - 802.2 Chemical Reactions - 951 Materials Science

- 761 Nanotechnology - 712.1 Semiconducting Materials - 544.1 Copper - 543.5

Tungsten and Alloys - 741.1 Light/Optics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130616000247

Title: Water resources allocation based on the grey theory and the improved electromagnetism-like algorithm

Authors: Li, Wei-Qian¹ ; Xie, Jian-Cang¹ ; Li, Jian-Xun¹ ; Yang, Ming-Xiang^{2, 3}/李维乾;解建仓;李建勋;杨明祥

Author affiliation:

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2 Tsinghua University, Beijing 100084, China

3 China Institute of Water Resource and Hydropower Research, Beijing 100038, China

Corresponding author: Li, W.-Q. (wqli@foxmail.com)

Source title: Shuili Xuebao/Journal of Hydraulic Engineering

Abbreviated source title: Shuili Xuebao

Volume: 43

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 1447-1456

Language: Chinese

ISSN: 05599350

CODEN: SLHPBI

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: Combined with the three principles of efficiency, fairness and sustainability in the process of water resources allocation, the multi-object water resources allocation model based on the interval grey numbers is built in view of the uncertainty of the water resources, society,

economy, environment and other index factors. On the basis of using interval grey numbers prediction method calculating the data of the index of the planning years, this model makes the maximum economic benefit, minimum wastewater and water shortage as the effectiveness goal, the minimum Gini coefficient distributed equally in the branch areas of the water resources as the fairness goal, and a distance coordination model to evaluate the sustainability goal of water resources allocation. It turns the uncertain multi-objective problem into a certain single objective one, and calculates by using the improved algorithm of electromagnetism. Finally, the model is applied to certain northwest area. The result shows that the structure of the model is reasonable and the method is simple and effective.

Number of references: 23

Main heading: Water resources

Controlled terms: Algorithms - Electromagnetism - Resource allocation -

Sustainable development - Water supply

Uncontrolled terms: Coordination degree - Coordination model - Economic

benefits - Electromagnetism-like algorithm - Gini coefficients - Grey theory -

Interval grey number - Multi-objective problem - Multiobject - Prediction methods

- Resources allocation - Single objective - Water shortages

Classification code: 921 Mathematics - 912.3 Operations Research - 911.2 Industrial Economics - 723 Computer Software, Data Handling and Applications - 701 Electricity and Magnetism - 446.1 Water Supply Systems - 444 Water Resources

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130616000750

Title: Cause analysis of plate pitting corrosion in lubricating oil cooler of main equipment in datang weihe thermal power plant

Authors: Li, Zhouping¹ ; Hu, Xiaojian¹ ; Ma, Haiyan² ; Yan, Siwei² ; Yan, Aijun^{2, 3} ; Feng, Lajun³;;; 闫爱军;冯拉俊

Author affiliation:

1 Datang Weihe Thermal Power Plant, Xianyang, Shaanxi, 712038, China

2 Shaanxi Electric Power Research Institute, Xi'an 710054, China

3 Xi'an University of Technology, Shaanxi Provincial Key Laboratory for Corrosion and Protection, Xi'an, 710048, China

Corresponding author: Li, Z. (396655562@qq.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 634-638

Issue: 1

Monograph title: Advances in Chemical, Material and Metallurgical Engineering

Issue date: 2013

Publication year: 2013

Pages: 1677-1681

Language: English

ISSN: 10226680

ISBN-13: 9783037855898

Document type: Conference article (CA)

Conference name: 2012 2nd International Conference on Chemical, Material and Metallurgical Engineering, ICCMME 2012

Conference date: December 15, 2012 - December 16, 2012

Conference location: Kunming, China

Conference code: 95231

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The plate heat exchanger in oil cooler of unit 2 in a thermal power plant became corrosion perforation after 2-year running, and severe pits were found on its surface. The material and scale composition of the lubricating oil cooler was analyzed, and it was found that the oil cooler was made of 304 stainless steel, instead of the 316 stainless steel provided by factory. The corrosion products on the corroded surface were composed of some characteristic elements in cooling water. The analysis suggested that the reason for corrosion perforation of the heat exchanger could be associated with its material composition, and the under scale corrosion formed under the action of scale deposition could also cause corrosion perforation and large-scale pits. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Cooling systems

Controlled terms: Energy dispersive spectroscopy - Heat exchangers - Lubricating oils - Metallurgical engineering - Pitting - Scanning electron microscopy - Stainless steel - Thermoelectric power plants

Uncontrolled terms: 304 stainless steel - 316 stainless steel - Corroded surface - Corrosion products - Material compositions - Oil cooler - Plate heat exchangers - Scale composition - Scale deposition - Thermal power plants

Classification code: 741.1 Light/Optics - 616.1 Heat Exchange Equipment and Components - 607.1 Lubricants - 801 Chemistry - 545.3 Steel - 531 Metallurgy and Metallography - 402.1 Industrial and Agricultural Buildings - 539.1 Metals Corrosion

DOI: 10.4028/www.scientific.net/AMR.634-638.1677

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130615996498

Title: Technology research on wear-resistant coating of control valve in coal-chemical industry

Authors: Liu, Haibo^{1, 2}; Wu, Qiaomei²; Fu, Weiping¹; Ma, Yushan²; Gao, Qiang²/刘海波; 吴巧梅; 傅卫平; 马玉山; 高强

Author affiliation:

1 Faculty of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Wuzhong Instrument Co. Ltd., Wuzhong 751100, China

Corresponding author: Liu, H. (lhb@wzyb.com.cn)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 33

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 2825-2832

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: Aiming at the special conditions of the valves used in coal chemical industry, in order to improve the wear resistance of the valve trim, three typical processing technologies are adopted, which are high velocity oxy-fuel (HVOF), atmospheric plasma spray (APS) and plasma transferred arc (PTA); and the typical materials that match the above processing technologies are selected to spray the sample. Abrasion test, hardness test and micro-structure analysis reveal that APS uses much higher spraying temperature than HVOF, which could contribute to the carbide oxidation and dissolution in the matrix, after deposition the coating flexibility increases and the worn surface is difficult to be cracked down and peeled off. In HVOF spraying process, the particles have high impact speed and over-heating does not happen; and the coatings are under compressive stress, have high density and good wear resistance characteristic. The coating of PTA hardfacing has strong binding force with the base material, high hardness and good thickness, its wear resistance characteristic is between those of APS and HVOF.

Number of references: 16

Main heading: HVOF thermal spraying

Controlled terms: Carbides - Chemical industry - Coal - Coatings - Hard facing - Hardness - Pipe flow - Plasma spraying - Plasma welding - Safety valves - Spraying - Wear resistance

Uncontrolled terms: Abrasion tests - Atmospheric plasma spray - Base material - Control valves - Hardness test - High density - High hardness - High impact - High velocity oxy-fuel - Over-heating - Plasma transferred arc - Processing technologies - Resistance characteristics - Spraying process - Strong binding - Technology research - Wear-resistant coating - Worn surface

Classification code: 932.3 Plasma Physics - 914.1 Accidents and Accident Prevention - 813.1 Coating Techniques - 812.1 Ceramics - 951 Materials Science - 805 Chemical Engineering, General - 539 Metals Corrosion and Protection; Metal Plating - 524 Solid Fuels - 421 Strength of Building Materials; Mechanical Properties - 619.1 Pipe, Piping and Pipelines

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130615997444

Title: Analysis of the thickness of the PDMS layer in structure of the stretchable sensors

Authors: Lu, Yanjun1 ; Zhu, Hongbin1 ; Zhang, Yongfang2 ; Hei, Di1/吕延军;;张永芳;黑隼

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Lu, Y. (lyj_xaut@hotmail.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 278-280

Monograph title: Advances in Mechatronics and Control Engineering

Issue date: 2013

Publication year: 2013

Pages: 852-855

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855959

Document type: Conference article (CA)

Conference name: 2012 International Conference on Mechatronics and Control Engineering, ICMCE 2012

Conference date: November 29, 2012 - November 30, 2012

Conference location: Guangzhou, China

Conference code: 95258

Sponsor: Queensland University of Technology, Australia; Korea Maritime University; Hong Kong Industrial Technology Research Centre; Inha University, Korea

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The prospective application of flexible electronics is feasible by shielding the silicon ribbons from damage in the structure. The silicon failure in the design of strain isolation for stretchable and flexible sensors is analyzed by FEM. The destruction of the silicon circuit is different with the change of the thickness of the PDMS layer in stretchable sensors. Owing to the fact that the PDMS layer is not infinitely thick in the application, the purpose of the paper is to provide a reference for choosing the thickness of the PDMS layer in the design of stretchable sensors. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Sensors

Controlled terms: Finite element method - Microchannels - Silicon

Uncontrolled terms: Flexible sensor - Prospective applications - Silicon circuits - Silicon ribbons - Strain isolation - Thickness of the PDMS layer

Classification code: 604 Metal Cutting and Machining - 631 Fluid Flow - 712.1.1

Single Element Semiconducting Materials - 801 Chemistry - 921.6 Numerical Methods

DOI: 10.4028/www.scientific.net/AMM.278-280.852

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20130515973180

Title: Applications of information navigation method in wireless sensor networks

Authors: Wei, Wei¹ ; Zhang, Liang² ; Guo, De-Ke³ ; Shen, Pei-Yi²/魏巍;张亮;郭德科;沈沛意

Author affiliation:

1 School of Computer Science and Technology, Xi'an University of Technology, Xi'an 710048, China

2 National School of Software, Xidian University, Xi'an 710071, China

3 School of Information System and Management, National University of Defense Technology, Changsha 410073, China

Corresponding author: Wei, W.

Source title: Tongxin Xuebao/Journal on Communications

Abbreviated source title: Tongxin Xuebao

Volume: 33

Issue: SUPPL.2

Issue date: November 2012

Publication year: 2012

Pages: 146-152

Language: Chinese

ISSN: 1000436X

Document type: Journal article (JA)

Publisher: Editorial Board of Journal on Communications, No.1 Binhe Road, Hepingli, Dongcheng District, Beijing, 1000013, China

Abstract: For adapting to a novel architecture of WSNs, which supports information query and navigation systems through construction of the virtual potential field. Under the premise of diffusion equation and poisson-based formula, a novel method was proposed which can accomplish the navigation more conveniently and more efficiently. In order to guarantee the accuracy of navigation, the relative knowledge of information transmission and the partial differential process (diffusion equation) in electric potential field was utilized, meanwhile gradient descent method was also applied in the process of application. A complete mathematical derivation was used. Tiny-OS simulations show the method can efficiently overcome the original WSNs weakness that network configuration abilities of information navigation are not good enough. Simultaneously, during the process of explore the navigation computation, structures of diffusion equation are more flexible and adaptability.

Number of references: 25

Main heading: Wireless sensor networks

Controlled terms: Computer simulation - Electric potential - Information retrieval - Navigation systems - Partial differential equations

Uncontrolled terms: Diffusion equations - Electric potential fields - Gradient Descent method - Information field - Information query - Information transmission - Mathematical derivation - Navigation methods - Network configuration - Novel architecture - Partial differential - Potential field - Variation models

Classification code: 434.4 Waterway Navigation - 701.1 Electricity: Basic Concepts and Phenomena - 723.5 Computer Applications - 732 Control Devices - 921.2 Calculus

DOI: 10.3969/j.issn.1000-436x.2012.z2.019

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130615999688

Title: Numerical analysis of the infiltration process of WCu pseudo-alloy

Authors: Xiao, Peng¹ ; Wang, Ni¹ ; Yang, Xiaohong¹/肖鹏;王妮;杨晓红

Author affiliation:

1 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xiao, P. (xiaopeng01@xaut.edu.cn)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 41

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 2139-2143

Language: Chinese

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: The process of melt infiltration of WCu alloy was simulated by the finite element software. A spherical particle skeleton model was established according to the distributing morphology of W particles. The pressure and the velocity vector distribution of copper liquid in the flow path were analyzed in isodiametric and non-isodiametric porous system. The relationship between the depth and time of infiltration in the porous system is obtained when the average particle size of W powder is 5 μm , which is in good agreement with experimental values. © 2012, Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 12

Main heading: Cerium alloys

Controlled terms: Alloys - Computer simulation - Finite element method

Uncontrolled terms: Average particle size - Experimental values - Finite element software - Flow path - Infiltration process - Melt infiltration - Particle packings - Porous system - Spherical particle - Velocity vector distribution - W-Cu alloys

Classification code: 531.1 Metallurgy - 547.2 Rare Earth Metals - 723.5 Computer Applications - 921.6 Numerical Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20130615997015

Title: Formation of micro spot-welding joint of rapidly solidified Ni-19.8%Sn alloy foils

Authors: Zhai, Q.Y.1 ; Xu, J.F.1 ; Zhang, X.1 ; Guo, X.F.1/翟秋亚;徐锦锋;;郭学峰

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhai, Q. Y. (qiuyazhai@xaut.edu.cn)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 630

Monograph title: Manufacturing Technology

Issue date: 2013

Publication year: 2013

Pages: 23-29

Language: English

ISSN: 10226680

ISBN-13: 9783037855836

Document type: Conference article (CA)

Conference name: 2012 International Conference on Manufacturing, Manufacturing 2012

Conference date: November 14, 2012 - November 15, 2012

Conference location: Macau, China

Conference code: 95242

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this study, the spot welding of rapidly solidified Ni-19.8%Sn alloy foils has been conducted by a micro-type capacitor discharge welder. The configuration and microstructural morphology of the joint were examined experimentally and the temperature of the micro nugget was analyzed numerically. The results show that the micro-joint consists of an oblate spheroid nugget and a 2.0~3.0 μm thick bond zone. The microstructure of the joint is fine and homogeneous and there is no coarsening sign in the parent materials near nugget. During solidification, the cooling rate of nugget is so high to the order of 106K/s that the eutectic reaction of $L \rightarrow \alpha\text{-Ni} + \text{Ni}_3\text{Sn}$ was suppressed or at least partly suppressed and almost all of the liquid within the joint solidified into supersaturated $\alpha\text{-Ni}$. Therefore, the joint microstructure which is consistent with the microstructure of the alloy foils shows the characteristics of rapid solidification. In addition, A kind of streamline due to vortex flow in micro nugget, with dispersed droplets distributes in cluster along the streamline, is formed under electromagnetic force and electrode pressure. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Tin alloys

Controlled terms: Alloys - Capacitors - Cerium alloys - Coarsening -

Manufacture - Morphology - Rapid solidification - Soldered joints - Spot welding - Tin

Uncontrolled terms: Capacitor discharge - Capacitor discharge welding - Cooling rates - Electrode pressure - Electromagnetic forces - Eutectic reactions - Joint microstructures - Micro-joint - Micro-joint - Microstructural morphology - Oblate spheroid - Parent materials - Rapidly solidified - Sn alloys

Classification code: 933 Solid State Physics - 704.1 Electric Components - 547.2 Rare Earth Metals - 546.2 Tin and Alloys - 951 Materials Science - 538.2.1 Welding Processes - 537.1 Heat Treatment Processes - 531.1 Metallurgy - 531 Metallurgy and Metallography - 538.1.1 Soldering

DOI: 10.4028/www.scientific.net/AMR.630.23

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20130616000348

Title: Research on influence of thermal stress on fractured rock mass strength

Authors: Zhang, Yan¹ ; Li, Ning¹ ; Yu, Haiming² ; Xu, Bin³/张艳;李宁;;

Author affiliation:

1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 Xinjiang Water Conservation Hydroelectricity Survey Design Research Institute, Urumqi, Xinjiang 830000, China

3 State Key Laboratory of Hydrosience and Engineering, Tsinghua University, Beijing 100084, China

Corresponding author: Zhang, Y. (ylozy@126.com)

Source title: Yanshilixue Yu Gongcheng Xuebao/Chinese Journal of Rock Mechanics and Engineering

Abbreviated source title: Yanshilixue Yu Gongcheng Xuebao

Volume: 32

Issue: SUPPL.1

Issue date: January 2013

Publication year: 2013

Pages: 2660-2668

Language: Chinese

ISSN: 10006915

CODEN: YLGXF5

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: Based on the theory of fracture mechanics, influence law of rock strength with single fracture, a set of fracture and multiple sets of fractures under the action of temperature stress caused by the temperature field higher than room temperature field is presented quantitatively. In the view of theoretical point, starting from elasticity mechanics, using the analytical method such as equivalent load method and principle of superposition, the thermal stress expression of a single fracture is added to the structural load expression of a single expression in representative volume element(REV). The micro-fracture strength expression of intermittent fractured media, of which crack tip of rock fracture is affected by certain temperature stress, is deduced. The microscale such as fracture length and fracture direction and so on is combined effectively and organically with the macroconditions such as temperature and strength. The strength expression of fractured rock at this stage has been improved. A exploration of new idea which could demonstrate the macro-, micro-levels and consider

temperature factor fully and describe rock stability comprehensively is elicited. At last, the relevant experimental results show that the formula established has high reliability.

Number of references: 21

Main heading: Fracture

Controlled terms: Crack tips - Cracks - Elasticity - Fracture mechanics -

Fracture toughness - Rock mechanics - Rocks - Temperature - Thermal stress

Uncontrolled terms: Analytical method - Elasticity mechanics - Equivalent load

- Fracture length - Fractured media - Fractured rock - Fractured rock mass - High

reliability - Micro-fracture - Micro-scales - Multiple set - Principle of

superposition - Representative volume element (RVE) - Rock fractures - Rock stability

- Rock strength - Single fracture - Temperature factor - Temperature stress -

Theoretical points - Theory of fracture mechanics

Classification code: 421 Strength of Building Materials; Mechanical Properties - 481.1

Geology - 502.1 Mine and Quarry Operations - 641.1 Thermodynamics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20130615987704

Title: Research on pollution control technologies of oil spill in river water with properties of biochemical materials

Authors: Zhao, Min¹ ; Wei, Bingqian² ; Liu, Yang²/赵敏;魏炳乾;刘洋

Author affiliation:

1 National Engineering Laboratory for Exploration and Development of Low-permeability Oil, Gas Fields, Oil and Gas Technology Research Institute of Changqing Oilfield Company, Xi'an, 710021, China

2 College of Hydraulic and Hydropower, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Zhao, M. (zhaomin001_cq@petrochina.com.cn)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 643

Monograph title: Advanced Research on Biochemical Materials and Nanotechnology Application

Issue date: 2013

Publication year: 2013

Pages: 21-24

Language: English

ISSN: 10226680

ISBN-13: 9783037855935

Document type: Conference article (CA)

Conference name: 2012 International Conference on Biochemical Materials and Nanotechnology Application, BMNA 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Yichang, China

Conference code: 95237

Sponsor: International Science and Education Researcher Association, China; Beijing Gireida Education Research Center; VIP-Information Conference Center, China

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In recent years, oil spill happens in river frequently, which has serious impact on the ecological environment and human health. So it is very important to conduct research on the pollution control technologies of oil spill in the river water. This paper analyzes the domestic and overseas existing oil spill pollution control technologies and puts forward the method combining oil recycling machine and oil dispersant to deal with the pollution caused by oil spill in Changqing Oilfield. Through the comparison, the turntable oil recycling machine and the SC-Y17 oil dispersant are finally selected. According to the experiment, we find that temperature has a great influence on the effect of oil dispersant and measures should be taken to improve the property to make it can adapt to the requirements of the low temperature environment. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Oil spills

Controlled terms: Materials properties - Nanotechnology - Oil fields - Pollution control - Pollution induced corrosion - Recycling - Research - River pollution - Rivers - Technology

Uncontrolled terms: Control technologies - Ecological environments - Human health - Low temperature environment - Oil dispersant - Oil recycling - Oil spill pollution - Pollution control technology - River water

Classification code: 901.3 Engineering Research - 901 Engineering Profession - 761 Nanotechnology - 511 Oil Field Equipment and Production Operations - 454.2 Environmental Impact and Protection - 453.1 Water Pollution Sources - 453 Water Pollution - 452.3 Industrial Wastes - 423 Non Mechanical Properties and Tests of Building Materials - 421 Strength of Building Materials; Mechanical Properties - 407.2 Waterways

DOI: 10.4028/www.scientific.net/AMR.643.21

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

17.

Accession number: 20130515973287

Title: Design of the mixed gas quantitative analysis based on grating spectral

Authors: Zhu, Lingjian¹ ; Chen, Jianhong¹ ; Kang, Shasha¹ ; Xiao, Yindi¹/朱凌建;陈建红;康莎莎;

Author affiliation:

¹ School of Mechanical and Instrumentation Engineering, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Zhu, L. (zlj_zhy@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 241-244

Monograph title: Industrial Instrumentation and Control Systems

Issue date: 2013

Publication year: 2013
 Pages: 135-139
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855461
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Measurement, Instrumentation and Automation, ICMIA 2012
 Conference date: September 15, 2012 - September 16, 2012
 Conference location: Guangzhou, China
 Conference code: 95105
 Sponsor: Queensland University of Technology; Korea Maritime University; Hong Kong Industrial Technology Research Centre; Inha University, Korea
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: A method of mixed gas quantitative analysis with near infrared spectroscopy (NIR) is described. A single plane diffraction grating is used in the monochromatic spectrum system. A quantitative analysis system is designed and constructed according to the parameters of the monochromator. The narrowband beam testing and spectral scanning experiments with methane and ethane are carried out. A 10nm narrowband beam is successfully obtained by the monochromatic system when the entrance slit width is 2mm. And a step-scanning resolution of the outgoing beam's centre wavelength with 0.1nm can be realized within the spectra of 1.0-1.8 μ m. The results show that methane and ethane have a maxim characteristic absorption spectrum respectively with the centre wavelength of 1653nm and 1690nm existing between the spectra of 1.6-1.8 μ m, which is consistent with the HITRAN database. Presented approach has a successful application in online mixed gas monitoring with the characteristics of simple structure and low cost. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 10
 Main heading: Diffraction gratings
 Controlled terms: Absorption spectra - Absorption spectroscopy - Diffraction - Electromagnetic wave absorption - Ethane - Flight control systems - Infrared devices - Methane - Near infrared spectroscopy
 Uncontrolled terms: Beam testing - Characteristic absorption - HITRAN database - Low costs - Mixed gas - Monochromatic spectrum - Narrow bands - Near Infrared - Simple structures - Slit width - Spectral scanning
 Classification code: 711 Electromagnetic Waves - 711.1 Electromagnetic Waves in Different Media - 731.1 Control Systems - 741 Light, Optics and Optical Devices - 801 Chemistry - 804.1 Organic Compounds
 DOI: 10.4028/www.scientific.net/AMM.241-244.135
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 18.
 Accession number: 20130515979772

Title: Non-geodesic trajectories for filament wound composite truncated conical domes

Authors: Zu, Lei1 ; He, Qinxiang1 ; Shi, Junping1 ; Li, Hui1/祖磊;何钦相;师俊平;李辉

Author affiliation:

1 Department of Engineering Mechanics, School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zu, L. (lzu@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 281

Monograph title: 2nd International Conference on Mechanical Engineering, Materials and Energy, ICMEME 2012

Issue date: 2013

Publication year: 2013

Pages: 304-309

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855928

Document type: Conference article (CA)

Conference name: 2nd International Conference on Mechanical Engineering, Materials and Energy, ICMEME 2012

Conference date: October 26, 2012 - October 27, 2012

Conference location: Dalian, China

Conference code: 95259

Sponsor: Trans tech publications

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The goal of this paper is to present non-geodesic trajectories for filament wound truncated conical domes for pressure vessels. The fiber trajectories for non-geodesically overwound truncated conical shells are obtained based on differential geometry and the non-geodesic winding law. The influence of the slippage coefficient on non-geodesic trajectories is evaluated in terms of the winding angle distributions. The non-geodesic trajectories corresponding to various initial winding angles are also illustrated for the given slippage coefficient. The results show that the winding angle distribution of non-geodesics on a truncated conical dome has an overall increase with the increase of the slippage coefficient or the initial winding angle. The present method can provide a significant reference for developing non-geodesically overwound conical structures. © (2013) Trans Tech Publications, Switzerland.

Number of references: 10

Main heading: Geodesy

Controlled terms: Composite materials - Domes - Filament winding - Geometry - Mechanical engineering - Trajectories

Uncontrolled terms: Conical structures - Differential geometry - Filament wound - Non-geodesic - Truncated conical shell - Winding angle

Classification code: 951 Materials Science - 921 Mathematics - 816.1 Processing of

Plastics and Other Polymers - 811 Cellulose, Paper and Wood Products - 608 Mechanical Engineering, General - 415 Metals, Plastics, Wood and Other Structural Materials - 408.2 Structural Members and Shapes - 405.3 Surveying - 404.1 Military Engineering
DOI: 10.4028/www.scientific.net/AMM.281.304
Database: Compendex
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2013-02-22 新增 15 条

1.

Accession number: 20130716013127

Title: Sensitivity analysis of the influences of rock mechanical parameters on the deformation of underground caverns

Authors: Chen, Fangfang¹ ; Zhang, Zhiqiang² ; Li, Ning²/陈方方;张志强;李宁

Author affiliation:

1 School of Architecture and Civil Engineering, Xi'an University of Science and Technology, Xi'an, 710054, China

2 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Chen, F. (love-teaching@126.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 275-277

Monograph title: Applied Mechanics and Materials I

Issue date: 2013

Publication year: 2013

Pages: 262-268

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855911

Document type: Conference article (CA)

Conference name: 2012 International Conference on Applied Mechanics and Materials, ICAMM 2012

Conference date: November 24, 2012 - November 25, 2012

Conference location: Sanya, China

Conference code: 95257

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The Main factors affecting the stability of underground caverns are selected, including the rock mechanical parameters (elastic modulus, Poisson ratio, cohesion and internal friction angle) and initial ground stress parameter (lateral pressure coefficient). Numerical test method is adopted to analyze each parameter's sensitivity to surrounding rock displacement. Sensitivity formula making each values comparable is established. The sensitivity distribution laws are obtained, and then each parameter's quantitative effect on displacement is discussed.

This work has prominent guiding significance to engineering designs. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Sensitivity analysis

Controlled terms: Caves

Uncontrolled terms: Displacement - Engineering design - Initial ground stress - Internal friction angle - Lateral pressure coefficient - Numerical tests - Quantitative effects - Rock mechanical parameters - Sensitivity distributions - Surrounding rock - Underground cavern

Classification code: 481.1 Geology - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMM.275-277.262

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130716025197

Title: The correction of mutual coupling and the amplitude and phase error based on digital beamforming receiving antenna

Authors: Du, Yongxing^{1, 2}; Xi, Xiaoli¹; Xi, Wenjing¹; Zhou, Lili¹/杜永兴;席晓莉;;周丽丽

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, China

2 School of Information Engineering, Inner Mongolia University of Science and Technology, Baotou, China

Corresponding author: Du, Y. (dyxql@imust.edu.cn)

Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE

Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Issue date: 2012

Publication year: 2012

Pages: 231-233

Article number: 6408751

Language: English

ISBN-13: 9781467317993

Document type: Conference article (CA)

Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Conference date: October 22, 2012 - October 26, 2012

Conference location: Xi'an, China

Conference code: 95470

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: By measuring the GPS antenna pattern, based on the minimum variance

distortionless response adaptive beamforming principle, An easy method to suppress the mutual coupling between array antenna elements and the amplitude and phase errors was presented in this paper and the effectiveness of the proposed algorithm was validated in a four-element linear equispaced array and circular array and simulation results show the performance of this method.

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Number of references: 7

Main heading: Receiving antennas

Controlled terms: Beamforming

Uncontrolled terms: Adaptive Beamforming - Amplitude and phase error - Array antennas - Circular arrays - Digital beam forming - Minimum variance distortionless response - Mutual coupling

Classification code: 713 Electronic Circuits - 716 Telecommunication; Radar, Radio and Television - 731 Automatic Control Principles and Applications - 732 Control Devices

DOI: 10.1109/ISAPE.2012.6408751

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130716016419

Title: Noise investigation of Terahertz photoconductive emitters

Authors: Hou, L.1 ; Shi, W.1 ; Chen, S.1 ; Du, Y.1 ; Chen, Y.1/侯磊;施卫;;;

Author affiliation:

1 Department of Applied Physics, Xian University of Technology, Xian, Shaanxi 710048, China

Corresponding author: Hou, L.

Source title: International Conference on Infrared, Millimeter, and Terahertz Waves, IRMMW-THz

Abbreviated source title: Int. Conf. Infrared, Millim., Terahertz Waves, IRMMW-THz

Monograph title: IRMMW-THz 2012 - 37th International Conference on Infrared, Millimeter, and Terahertz Waves

Issue date: 2012

Publication year: 2012

Article number: 6380254

Language: English

ISSN: 21622027

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Conference name: 37th International Conference on Infrared, Millimeter and Terahertz Waves, IRMMW-THz 2012

Conference date: September 23, 2012 - September 28, 2012

Conference location: Wollongong, NSW, Australia

Conference code: 95412

Sponsor: Office of Naval Research Science and Technology; UOW Engineering, School of Engineering Physics; Centre for Ultrahigh bandwidth Devices for Optical Systems; Edinburgh Photonics; TYDEX

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: The electromagnetic noise generated by terahertz photoconductive emitters was investigated, and the intensity of noise spectrum was analysed by statistical method. The relationship between the noise of the emitter and the resistivity as well as carrier lifetime of the antenna material was obtained. And the effect of carrier lifetime and mobility of antennas on the THz generation efficiency was investigated. © 2012 IEEE.

Number of references: 8

Main heading: Antennas

Controlled terms: Electrooptical effects - Terahertz waves

Uncontrolled terms: Electromagnetic noise - Noise investigation - Noise spectra
- Photoconductive emitters - Tera Hertz - THz generation

Classification code: 711 Electromagnetic Waves - 716 Telecommunication; Radar, Radio and Television - 741.1 Light/Optics

DOI: 10.1109/IRMMW-THz.2012.6380254

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130716012031

Title: Noise analysis and optimization of terahertz photoconductive emitters

Authors: Hou, Lei1 ; Shi, Wei1 ; Chen, Suguo1/侯磊;施卫;陈素果

Author affiliation:

1 Department of Applied Physics, Xian University of Technology, Xian 710048, China

Corresponding author: Hou, L. (houleixaut@hotmail.com)

Source title: IEEE Journal on Selected Topics in Quantum Electronics

Abbreviated source title: IEEE J Sel Top Quantum Electron

Volume: 19

Issue: 1

Issue date: 2013

Publication year: 2013

Article number: 6156513

Language: English

ISSN: 1077260X

CODEN: IJSQEN

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: The electromagnetic noise generated by terahertz photoconductive emitters was investigated, and the intensity of noise spectrum was analyzed by statistical method. The relationship between the noise of the emitter and the resistivity as well as carrier lifetime of the antenna material was obtained. And the effect of carrier lifetime and mobility of antennas on the THz generation efficiency was investigated. Based on those results, GaAs:O material was fabricated by an ion implantation technique to obtain the required performance. The signal-to-noise ratio of the GaAs:O emitter was remarkably improved compared with a SI-GaAs

emitter at the same experimental condition. © 1995-2012 IEEE.

Number of references: 21

Main heading: Signal to noise ratio

Controlled terms: Antennas - Electrooptical effects - Gallium arsenide - Ion implantation - Microwave antennas - Semiconducting gallium

Uncontrolled terms: Electromagnetic noise - Experimental conditions - GaAs - Implantation technique - Noise analysis - Noise spectra - Photoconductive antennas - Photoconductive emitters - Si-GaAs - Signaltonoise ratio (SNR) - Tera Hertz - THz generation

Classification code: 712.1 Semiconducting Materials - 712.1.1 Single Element Semiconducting Materials - 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 741.1 Light/Optics - 804 Chemical Products Generally

DOI: 10.1109/JSTQE.2012.2188781

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20130616005424

Title: An innovative approaches to key characteristic parameter transform of product

Authors: Ji, Xiaomin1 ; He, Xuemei1, 2/吉晓民;

Author affiliation:

1 School of Mechanical Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

2 College of Art and Design, Shaanxi University of Science and Technology, Xi'an 710021, Shaanxi, China

Corresponding author: Ji, X.

Source title: International Review on Computers and Software

Abbreviated source title: Int. Rev. Comput. Softw.

Volume: 7

Issue: 5

Issue date: September 2012

Publication year: 2012

Pages: 2431-2434

Language: English

ISSN: 18286003

E-ISSN: 18286011

Document type: Journal article (JA)

Publisher: Praise Worthy Prize Inch, 2959 Ruth Rd.Wantag, New York, 11793-1055, United States

Abstract: In this paper, according to the systematic design ideas, innovative theory and methods of "the key characteristic of parameter transformation" is inventively put forward, and the design principles and essence of the key characteristic parameters transformation of the product are mainly illustrated. Based on in-depth analysis of consumers' requirement, the importance degree of consumer demand is determined by applying to rough set theory, and then

1-3 key characteristics are chosen according to the importance degree of consumers' requirement. Grounded on this, the operating method of key characteristics parameter transformation is explored. Variant design is adopted to produce new output by transforming key characteristic parameters, and the nature of content in product innovation design is analyzed so as to provide a viable new ideas and methods for innovation and design of the product. © 2012 Praise Worthy Prize S.r.l. - All rights reserved.

Number of references: 9

Main heading: Product design

Controlled terms: Feature extraction - Rough set theory

Uncontrolled terms: Consumer demands - Design Principles - In-depth analysis
- Innovative approaches - Key characteristics - Parameter transformation - Product innovation - Systematic designs - Theory and methods - Variant design

Classification code: 716 Telecommunication; Radar, Radio and Television - 913.1

Production Engineering - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130716008392

Title: Three dimensional simulation of basin water pollution incidents based on multi-agent and grid technology

Authors: Li, Weiqian¹ ; Xie, Jiancang¹ ; Li, Jianxun^{1, 2} ; Shen, Hai^{1, 3}/李维乾;解建仓;李建勋;申海

Author affiliation:

1 Water Resources Research Institute, Xi'an University of Technology, Xi'an, China

2 College of Economics and Management, Xi'an University of Technology, Xi'an, China

3 Department of General Studies, Xi'an International Studies University, Xi'an, China

Corresponding author: Li, W. (wqli@foxmail.com)

Source title: Proceedings - 2012 5th International Symposium on Computational Intelligence and Design, ISCID 2012

Abbreviated source title: Proc. - Int. Symp. Comput. Intell. Des., ISCID

Volume: 2

Monograph title: Proceedings - 2012 5th International Symposium on Computational Intelligence and Design, ISCID 2012

Issue date: 2012

Publication year: 2012

Pages: 470-473

Article number: 6406040

Language: English

ISBN-13: 9780769548111

Document type: Conference article (CA)

Conference name: 2012 5th International Symposium on Computational Intelligence and Design, ISCID 2012

Conference date: October 28, 2012 - October 29, 2012

Conference location: Hangzhou, China

Conference code: 95304

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: According to the complexity and the uncertainty of emergent water pollution incidents in a basin, and the demand of the rapid visual access to the future pollution condition on emergency decision-making platform, this paper puts forward the fast forecasting and simulation of water pollution diffusion events platform based on the Multi-Agent modeling, the grid technology and 3S technique. First form a square grid Agent system which contains multiple WaterAgent, and the WaterAgent was used to describe and depict the spread phenomenon of pollutants; and then a remote sensing intelligent grid was built based on Agent to manage the vast and distributed image data of the basin, meanwhile, the high performance computing power was offered to a huge number of WaterAgent containing pollutants by the use of the grid middleware. On this basis, the contaminant transport process was fully displayed by 3S technique; finally, the platform was applied to an emergent water pollution incidents of Weihe River. The results show that the platform, which can rapidly simulate the emergent water pollution incidents of the basin, is reasonable and effective. © 2012 IEEE.

Number of references: 10

Main heading: Three dimensional computer graphics

Controlled terms: Agents - Artificial intelligence - Information management - Middleware - Oil spills - Pollution - Remote sensing - River pollution - Smart power grids - Three dimensional - Uncertainty analysis - Water pollution

Uncontrolled terms: 3S techniques - Contaminant transport - GRID middleware - Grid technologies - High performance computing - Image data - Multi-agent modeling - Pollution incidents - Square grid - Three dimensional simulations - Visual access

Classification code: 922.1 Probability Theory - 903.2 Information Dissemination - 803 Chemical Agents and Basic Industrial Chemicals - 731.1 Control Systems - 723 Computer Software, Data Handling and Applications - 706.1 Electric Power Systems - 454.2 Environmental Impact and Protection - 453.1 Water Pollution Sources - 453 Water Pollution

DOI: 10.1109/ISCID.2012.287

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130716008157

Title: Study of channel adaptive hopping technology on industrial wireless networks

Authors: Liu, Wenzhi1 ; Liu, Zhaobin1 ; Gu, Caidong1 ; Zhao, Hongyi2/;;

Author affiliation:

1 Jiangsu Province Support Software Engineering R and D, Center for Modern Information Technology Application in Enterprise, Suzhou Jiangsu, China

2 High Technical College, Xi'An University of Technology, Xian Shanxi, China

Corresponding author: Liu, W. (lwzsz@126.com)

Source title: Proceedings - 2012 5th International Symposium on Computational

Intelligence and Design, ISCID 2012

Abbreviated source title: Proc. - Int. Symp. Comput. Intell. Des., ISCID

Volume: 1

Monograph title: Proceedings - 2012 5th International Symposium on Computational Intelligence and Design, ISCID 2012

Issue date: 2012

Publication year: 2012

Pages: 62-64

Article number: 6406875

Language: English

ISBN-13: 9780769548111

Document type: Conference article (CA)

Conference name: 2012 5th International Symposium on Computational Intelligence and Design, ISCID 2012

Conference date: October 28, 2012 - October 29, 2012

Conference location: Hangzhou, China

Conference code: 95304

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: In order to ensure industrial wireless network communication channel is capable of a transition to the smooth communication channel when disturbed, and improve the performance of the coexistence with other RF systems. This paper analyzes the communication protocol architecture of industrial wireless network, gives the MAC sub-layer integration model of the ISA SP100.11a and IEEE 802.15.4 based on the link layer. Through using channel adaptive hopping technology, detection and shielding the worse assessment channel, in order to reduce the influence of the multipath jam, increase the system reliability. © 2012 IEEE.

Number of references: 8

Main heading: Wireless networks

Controlled terms: Artificial intelligence - Communication channels (information theory) - Industry - Medium access control

Uncontrolled terms: Channel adaptive - Industrial wireless network - Integration models - Link layers - MAC protocol - MAC sublayer - RF system - System reliability

Classification code: 913 Production Planning and Control; Manufacturing - 912 Industrial Engineering and Management - 911 Cost and Value Engineering; Industrial Economics - 723.4 Artificial Intelligence - 723 Computer Software, Data Handling and Applications - 716.3 Radio Systems and Equipment - 716.1 Information Theory and Signal Processing

DOI: 10.1109/ISCID.2012.24

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130616004217

Title: Influence of intermediate principal stress effect on flat punch problems

Authors: Ma, Zongyuan1 ; Liao, Hongjian2 ; Dang, Faning1/马宗源;廖红建;党发宁

Author affiliation:

1 School of Civil Engineering and Architecture, Xi'an University of Technology, Jinhua South Road No.5, Xi'an city, Shaanxi, 710048, China

2 Department of Civil Engineering, Xi'an Jiaotong University, Xianning west road No.28, Xi'an city, Shaanxi, 710049, China

Corresponding author: Ma, Z. (mzy_gogo@hotmail.com)

Source title: Key Engineering Materials

Abbreviated source title: Key Eng Mat

Volume: 535-536

Monograph title: Advances in Engineering Plasticity XI

Issue date: 2013

Publication year: 2013

Pages: 300-305

Language: English

ISSN: 10139826

CODEN: KEMAEY

ISBN-13: 9783037855485

Document type: Conference article (CA)

Conference name: 11th Asia-Pacific Conference on Engineering Plasticity and Its Applications, AEPA 2012

Conference date: December 5, 2012 - December 7, 2012

Conference location: Singapore, Singapore

Conference code: 95345

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Using the finite difference code FLAC3D (Fast Lagrangian Analysis of Continua in 3 Dimensions) and UST (Unified Strength Theory), the influence of the intermediate principal stress effect on the problems of flat punch are analyzed in this paper. The values of the limit pressure resulting from numerical analyses and the analytical solution of Prandtl's strip punch problem are compared. The three-dimensional problems of strip, rectangular, square and circular punches on a semi infinite metallic medium have been analyzed. © (2013) Trans Tech Publications, Switzerland.

Number of references: 14

Main heading: Strength of materials

Controlled terms: Numerical analysis - Plasticity

Uncontrolled terms: 3-dimension - Fast Lagrangian analysis of continuum - Finite difference - Flat punches - Intermediate principal stress effects - Metallic material - Punch problem - Three-dimensional problems - Unified strength theory

Classification code: 921.6 Numerical Methods - 951 Materials Science

DOI: 10.4028/www.scientific.net/KEM.535-536.300

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130716025449

Title: Study on reduced-rand algorithms for space-time in GPS receiver
 Authors: Wang, Lili1 ; Kang, Bo1 ; Xi, Xiao Li1 ; Du, Yong Xing2/王丽黎;康博;席晓莉;杜永兴
 Author affiliation:
 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, China
 2 School of Information Engineering, Inner Mongolia University of Science and Technology, Baotou, China
 Corresponding author: Wang, L. (wanglili@xaut.edu.cn)
 Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012
 Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE
 Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012
 Issue date: 2012
 Publication year: 2012
 Pages: 1241-1244
 Article number: 6409004
 Language: English
 ISBN-13: 9781467317993
 Document type: Conference article (CA)
 Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012
 Conference date: October 22, 2012 - October 26, 2012
 Conference location: Xi'an, China
 Conference code: 95470
 Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
 Abstract: The principle problem about space-time adaptive anti-jam of GPS receiver system is the high computation complexity. In order to reduce computation complexity, a new algorithm about Correlation Subtraction Architecture of the Multistage Wiener Filter (CSA-MWF) is proposed, which is no need to solve the block matrices. In this paper, a new implementing algorithm for CSA-MWF which needs a lower computation complexity is proposed, while keeping almost the same performance as the original CSA. The simulation results show the proposed algorithm can effectively filter almost all kinds of interference, which prove the effectiveness of the proposed algorithm. © 2012 IEEE.
 Number of references: 6
 Main heading: Global positioning system
 Controlled terms: Algorithms - Antennas
 Uncontrolled terms: Anti-jam - Block matrices - Computation complexity - GPS receivers - Multi stage Wiener filters
 Classification code: 716 Telecommunication; Radar, Radio and Television - 716.3 Radio Systems and Equipment - 723 Computer Software, Data Handling and Applications - 921 Mathematics
 DOI: 10.1109/ISAPE.2012.6409004

Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130716025202

Title: A miniature GPS microstrip antenna

Authors: Wang, Lili1 ; Deng, Lijuan1 ; Xi, Xiaoli1 ; Du, Yongxing1, 2/王丽黎;邓丽娟;席晓莉;杜永兴

Author affiliation:

1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, China

2 School of Information Engineering, Inner Mongolia University of Science and Technology, Baotou, China

Corresponding author: Wang, L. (wanglili@xaut.edu.cn)

Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE

Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Issue date: 2012

Publication year: 2012

Pages: 250-252

Article number: 6408756

Language: English

ISBN-13: 9781467317993

Document type: Conference article (CA)

Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Conference date: October 22, 2012 - October 26, 2012

Conference location: Xi'an, China

Conference code: 95470

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: This paper presents a novel structure of the GPS microstrip antenna, the working frequency of the antenna is GPS L1 band (at 1.575 GHz). The top-level patch of the antenna is an irregular shape, this shape is a centre of symmetry, and the purpose of such a design is in order to reduce the size of the antenna under the premise does not affect the antenna performance. Use ANSOFT HFSS simulation software to perform the simulation, the results show that the antenna was able to meet the requirements of the navigation satellite signals. © 2012 IEEE.

Number of references: 6

Main heading: Satellite antennas

Controlled terms: Computer software - Global positioning system - Microstrip antennas

Uncontrolled terms: Ansoft HFSS - Antenna performance - Irregular shape - Navigation satellites - Novel structures - Working frequency

Classification code: 716 Telecommunication; Radar, Radio and Television - 716.3 Radio Systems and Equipment - 723 Computer Software, Data Handling and Applications
DOI: 10.1109/ISAPE.2012.6408756

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130716025305

Title: Optoelectronic image process the scaling ratios between the light scattering characteristic and geometric dimensions of the target

Authors: Wang, Mingjun¹ ; Meng, Xue-Hong² ; Li, Ying Le¹ ; Deng, Rong³ ; Xiang, Ningjing¹;/;/;/;

Author affiliation:

1 School of Physics and Electronic Engineering, Xian Yang Normal College, Xianyang 712000, China

2 High technical college, Xi'an University of Technology, Xi'an 710082, China

3 Signature of Environments institute, Beijing 100854, China

Corresponding author: Wang, M. (wmjxd@yahoo.com.cn)

Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE

Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Issue date: 2012

Publication year: 2012

Pages: 668-671

Article number: 6408859

Language: English

ISBN-13: 9781467317993

Document type: Conference article (CA)

Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Conference date: October 22, 2012 - October 26, 2012

Conference location: Xi'an, China

Conference code: 95470

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: The experimental measurement and image processing methods are combined to study the light scattering characteristic from the target, principle of the scaling ratio between the light scattering characteristic and the geometric dimension of the target is presented in this paper. The solar simulator is utilized as a light source which incidence the target with rough surface. The original experimental images must be measured by light receiver and data gathering system. Some image algorithms are be designed to process these experimental data. As a researching example, the imaging light scattering characteristic of two kinds of bigger and smaller simple targets include clubs, cylinders are discussed in detail. The image processed results are shown the

scale ratio of the light scattering from target is proportional to its dimensional square. The important of our works is that the scaling ratios of the light scattering characteristic can be used to make known the illumination of the whole dimensional detected target, which are useful for further study the complex target such as civilian industries, national defence, air and aero fields.

© 2012 IEEE.

Number of references: 14

Main heading: Light scattering

Controlled terms: Antennas - Image processing - Light sources

Uncontrolled terms: Complex targets - Data gathering systems - Experimental datum - Experimental measurements - Geometric dimensions - Image algorithms - Image process - Image processing - methods - National defence - Rough surfaces - Scale ratio - Scaling ratio - Solar simulator

Classification code: 716 Telecommunication; Radar, Radio and Television - 741 Light, Optics and Optical Devices - 741.1 Light/Optics

DOI: 10.1109/ISAPE.2012.6408859

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20130616005417

Title: A Next-generation Broadband Multi-Mode Intelligent Gateway for a smart home system

Authors: Wang, Zhixiao^{1, 2}; Zhang, Kewang¹; Yan, Wenyao³; Shehadeh, Youssef El Hajj⁴; Gao, Ang¹;;;

Author affiliation:

1 School of Electronic and Information Engineering, Xi'an Jiaotong University, Xi'an 710049, Shaanxi, China

2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

3 Xi'an Innovation College, Yan'an University, Xi'an 710058, Shaanxi, China

4 Institute of Informatics, University of Goettingen, Goettingen 37077, Germany

Corresponding author: Wang, Z.

Source title: International Review on Computers and Software

Abbreviated source title: Int. Rev. Comput. Softw.

Volume: 7

Issue: 5

Issue date: September 2012

Publication year: 2012

Pages: 2378-2383

Language: English

ISSN: 18286003

E-ISSN: 18286011

Document type: Journal article (JA)

Publisher: Praise Worthy Prize Inch, 2959 Ruth Rd.Wantag, New York, 11793-1055, United States

Abstract: Intelligent gateways that interconnect home networks, public networks, and intelligent household devices play a critical role in smart home systems. However, the existing gateways could hardly be adapted to emerging multiple access methods and the multiple services' requirements for future smart home environments. This paper introduces the work in progress in constructing a stable and efficient Next-generation Broadband Multi-mode Intelligent Gateway (NBMIG) which supports multiple access methods, multiple services, IPv6, security, QoS and remotely web management. It is mainly based on an IXP425 network processor and a Linux kernel. We first present the hardware and software architectures of NBMIG, and then we introduce their in-detailed implementations. In the meantime, a smart home system is proposed based on NBMIG and household appliances equipped with wireless and ZigBee adapters. Finally, the effectiveness and feasibility of NBMIG is verified through testing. © 2012 Praise Worthy Prize S.r.l. - All rights reserved.

Number of references: 23

Main heading: Gateways (computer networks)

Controlled terms: Automation - Domestic appliances - Intelligent buildings - Personal communication systems

Uncontrolled terms: Home networks - Household devices - Intelligent gateway - Intelligent home - Linux kernel - Multimodes - Multiple services - Multiple-access method - Network processor - Smart homes - Smart-home system - Web management - Work in progress

Classification code: 732 Control Devices - 731 Automatic Control Principles and Applications - 723 Computer Software, Data Handling and Applications - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 715 Electronic Equipment, General Purpose and Industrial - 522 Gas Fuels - 402 Buildings and Towers

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130616005418

Title: Resource allocation optimization of workflow with multi-instance and multi-resource based on Queuing Theory

Authors: Yang, Mingshun¹ ; Han, Zhoupeng¹ ; Gao, Xinqin¹ ; Liu, Yong¹ ; Du, Shaobo¹/杨明顺;;高新勤;刘勇;

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

Corresponding author: Yang, M.

Source title: International Review on Computers and Software

Abbreviated source title: Int. Rev. Comput. Softw.

Volume: 7

Issue: 5

Issue date: September 2012

Publication year: 2012

Pages: 2384-2393

Language: English

ISSN: 18286003

E-ISSN: 18286011

Document type: Journal article (JA)

Publisher: Praise Worthy Prize Inch, 2959 Ruth Rd.Wantag, New York, 11793-1055,
United States

Abstract: Resource allocation of workflow has a direct impact on the average execution time of process instances and the cost of an enterprise. Workflow resource optimization can effectively optimize the resource allocation amount to decrease the average running time of workflow instance and increase resource utilization rate and workflow's running efficiency. In this paper, time performance of workflow multi instances running are analyzed based on Queuing Theory, amount relationship between resource allocation amount and average running time of workflow instance is studied, then the mathematical model of resource optimization under multi-activity - multi-resource allocation style with constraints of resource cost and amount is built and the model is solved with simulated annealing algorithm to obtained the optimal resource allocation scheme to realize resource optimization in workflow running process. An example of furniture enterprise is illustrated to verify the presented method. © 2012 Praise Worthy Prize S.r.l. - All rights reserved.

Number of references: 24

Main heading: Resource allocation

Controlled terms: Industry - Mathematical models - Optimization - Queueing theory

Uncontrolled terms: Average Execution Time - Average running time - Direct impact - Enterprise IS - Multi-instance - Multi-resource - Optimal resource allocation - Process instances - Queuing theory - Resource allocation optimization - Resource costs - Resource optimization - Resource utilizations - Running efficiency - Running process - Simulated annealing algorithms

Classification code: 911 Cost and Value Engineering; Industrial Economics - 912 Industrial Engineering and Management - 913 Production Planning and Control; Manufacturing - 921 Mathematics - 921.5 Optimization Techniques - 922.1 Probability Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20130716013493

Title: Effect of different heat treatments on microstructure and mechanical properties of steel containing Ni of 9% base and weld metals

Authors: Zhang, Min¹ ; Chu, Qiaoling¹ ; Li, Jihong¹/张敏;褚巧玲;李继红

Author affiliation:

1 College of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, M.

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 275-277

Monograph title: Applied Mechanics and Materials I
 Issue date: 2013
 Publication year: 2013
 Pages: 2148-2155
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037855911
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Applied Mechanics and Materials, ICAMM 2012
 Conference date: November 24, 2012 - November 25, 2012
 Conference location: Sanya, China
 Conference code: 95257
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: An comparative study was made of microstructure and mechanical properties of steel constaining Ni of 9% in different heat treatments. Shielded metal arc welding (SMAW) was employed as jointing technique. Double normalizing and tempering (NNT) and quenching, intercritical quenching and tempering (QLT) were applied as the heat treatments. Instrumented impact and tensile tests were performed between 20°C and 196°C. The results show that both the microstructure and mechanical properties of base and weld metals in QLT solution turn out to be the optimal. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 7
 Main heading: Microstructure
 Controlled terms: Mechanical properties - Quenching - Tempering - Tensile testing
 Uncontrolled terms: Comparative studies - Jointing techniques - Microstructure and mechanical properties - Quenching and tempering - Shielded metal arc welding - Tensile tests - Weld metal
 Classification code: 422.2 Strength of Building Materials : Test Methods - 537.1 Heat Treatment Processes - 933 Solid State Physics - 951 Materials Science
 DOI: 10.4028/www.scientific.net/AMM.275-277.2148
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 15.
 Accession number: 20130716025368
 Title: Application in low-frequency ground-wave propagation of parallel FDTD based on GPU
 Authors: Zhou, Lili¹ ; Xi, Xiaoli² ; Du, Yongxing²/周丽丽;席晓莉;杜永兴
 Author affiliation:
 1 College of Electrical and Information Engineering, Shaanxi University of Science and Technology, Weiyang District, Shaanxi 710021, China
 2 Faculty of Automation and Information Engineering, Xi'an University of Technology, JinHua

South Road 5, Shaanxi 710048, China

Corresponding author: Zhou, L. (zhoulili@sust.edu.cn)

Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE

Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Issue date: 2012

Publication year: 2012

Pages: 917-920

Article number: 6408922

Language: English

ISBN-13: 9781467317993

Document type: Conference article (CA)

Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Conference date: October 22, 2012 - October 26, 2012

Conference location: Xi'an, China

Conference code: 95470

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: The parallel FDTD technique based on the graphics processing unit (GPU) is used to predict the low-frequency (LF) ground-wave propagation over irregular terrains in this paper. First of all, through comparing the prediction results of the smooth earth computed by the serial FDTD algorithm, the technique is verified. Then, with the specific examples, the speedup performance of the parallel algorithm is analyzed. The simulation results show that: the technique can improve the calculation speed greatly for long-distance ground-wave propagation problems. It provides an effective solution for the FDTD application in the wave propagation prediction of large-scale. © 2012 IEEE.

Number of references: 11

Main heading: Computer graphics equipment

Controlled terms: Antennas - Computer graphics - Finite difference time domain method - Forecasting - Program processors - Wave propagation

Uncontrolled terms: Calculation speed - Effective solution - FDTD algorithm - FDTD techniques - Graphics Processing Unit - Irregular terrain - Low-frequency - Propagation prediction

Classification code: 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory - 921 Mathematics - 723.5 Computer Applications - 723.1 Computer Programming - 722.2 Computer Peripheral Equipment - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves

DOI: 10.1109/ISAPE.2012.6408922

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20130716013381

Title: Semi-geodesics-based dome design for filament wound composite pressure vessels

Authors: Zu, Lei1 ; He, Qinxiang1 ; Shi, Junping1/祖磊;何钦相;师俊平

Author affiliation:

1 Department of Engineering Mechanics, School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zu, L. (lzu@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 275-277

Monograph title: Applied Mechanics and Materials I

Issue date: 2013

Publication year: 2013

Pages: 1601-1604

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037855911

Document type: Conference article (CA)

Conference name: 2012 International Conference on Applied Mechanics and Materials, ICAMM 2012

Conference date: November 24, 2012 - November 25, 2012

Conference location: Sanya, China

Conference code: 95257

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this paper we apply semi-geodesic trajectories to the creation of isotenoid domes for filament wound pressure vessels. The governing equations for the determination of the meridian shapes and related winding angle distributions of domes are derived using the netting analysis and the semi-geodesic winding law. The effects of the slippage coefficient on the geometry and fiber trajectories of the domes are respectively evaluated in terms of the resulting meridional curves and fiber angles. It is revealed that the semi-geodesic angles and the dome depth have an overall decrease with increasing the slippage coefficient. The results also demonstrate that the use of semi-geodesics significantly enlarge the design space for the geometry and adapted fiber trajectories of the domes. The present method can provide a significant reference for the design and production of the domes for semi-geodesically overwound pressure vessels. © (2013) Trans Tech Publications, Switzerland.

Number of references: 12

Main heading: Domes

Controlled terms: Design - Filament winding - Geodesy - Geometry - Pressure vessels - Trajectories

Uncontrolled terms: Composite pressure vessels - Design spaces - Fiber angles - Filament wound - Governing equations - Meridional curve - Netting analysis -

Semi-geodesics - Winding angle

Classification code: 921 Mathematics - 816.1 Processing of Plastics and Other Polymers
- 619.2 Tanks - 408.2 Structural Members and Shapes - 408 Structural Design - 405.3
Surveying - 404.1 Military Engineering

DOI: 10.4028/www.scientific.net/AMM.275-277.1601

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2013-03-02 新增 10 条

1.

Accession number: 20130816036887

Title: Workflow process modelling and resource allocation based on polychromatic sets theory

Authors: Gao, Xinqin¹ ; Xu, Lida^{2, 3, 4} ; Wang, Xueping⁵ ; Li, Yan¹ ; Yang, Mingshun¹ ; Liu, Yong¹/高新勤;;李言;杨明顺;刘勇

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Antai College of Economics and Management, Shanghai Jiaotong University, Shanghai 200052, China

3 Institute of Computing Technology, Chinese Academy of Sciences, Beijing 100190, China

4 Department of Information Technology and Decision Sciences, Old Dominion University, Norfolk, VA 23529, United States

5 School of Economics and Finance, Xi'an Jiaotong University, Xi'an 710061, China

Corresponding author: Gao, X. (xinqingao@gmail.com)

Source title: Enterprise Information Systems

Abbreviated source title: Enterp. Inf. Syst.

Volume: 7

Issue: 2

Issue date: May 2013

Publication year: 2013

Pages: 198-226

Language: English

ISSN: 17517575

E-ISSN: 17517583

Document type: Journal article (JA)

Publisher: Taylor and Francis Ltd., 4 Park Square, Milton Park, Abingdon, Oxfordshire, OX14 4RN, United Kingdom

Abstract: In workflow management, studying the relationship between workflow process activities and resource allocation is one of the interesting research topics. Polychromatic sets theory (PST) is a relatively new mathematical theory which is especially suitable for treating such problems. Based on PST, this paper proposes a framework of workflow process modelling and resource allocation. As the theoretical foundation, polychromatic sets (PS), polychromatic graph (PG) and isolation operation (IO) of the PS are introduced. Special net structure (SNS), a special

PG with colourless nodes and concolourous edges, is also introduced, and a new workflow process model and its verification algorithm are presented. Furthermore, a workflow resource model based on the entity of PS is developed. Based on IO of PS, the allocation mechanism that considers workflow process and workflow resource is proposed. Finally, a case study is provided to demonstrate the effectiveness of the above-mentioned theory and method. © 2013 Copyright Taylor and Francis Group, LLC.

Number of references: 71

Main heading: Resource allocation

Controlled terms: Algorithms - Process engineering - Work simplification

Uncontrolled terms: Hash table - isolation operation - Net structures -

polychromatic graph - Polychromatic set - Process model - Resource model -

Verification algorithms - workflow

Classification code: 723 Computer Software, Data Handling and Applications - 731

Automatic Control Principles and Applications - 912 Industrial Engineering and Management

- 921 Mathematics

DOI: 10.1080/17517575.2012.745617

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130816038246

Title: Computer aided form design based on multi-channel deformation technology

Authors: Guo, Lei1, 2 ; Ji, Xiaomin1 ; Bai, Xiaobo1/郭磊;吉晓民;白晓波

Author affiliation:

1 Xi'an University of Technology, Xi'an, 710048, China

2 University of Electronic and Technology of China, Zhongshan Institute, Zhongshan, 528402, China

Corresponding author: Guo, L. (79115521@QQ.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 651

Monograph title: 2012 International Conference on Engineering Materials, ICEM 2012

Issue date: 2013

Publication year: 2013

Pages: 564-568

Language: English

ISSN: 10226680

ISBN-13: 9783037856130

Document type: Conference article (CA)

Conference name: 2012 International Conference on Engineering Materials, ICEM 2012

Conference date: December 30, 2012 - December 31, 2012

Conference location: Singapore

Conference code: 95489

Sponsor: Information Engineering Research Institute, USA; Hong Kong Education Society;

Trans Tech Publications inc.; Singapore Management and Sports Science Institute

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: This paper, proposes a method that designers provide a basic conceptual form scheme of the products with multi- deformation channel, but a detailed form is modified by the users according to the locally changeable two or three dimensional models, and the needed several product form schemes can be achieved through statistic analysis of the feedbacks from the users. In this process, users redesign the form in the mean while of product evaluation, which makes the users have a good knowledge of the products and makes the designers get the direct statistics of the most desirable morph from the perspective of the users. This method combines the evaluation and design process together, which is able to promote the batter communication, thus to make design process more efficient. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Design

Controlled terms: Deformation - Three dimensional

Uncontrolled terms: Computer aided - Design process - Form design - Multi-channel - Product evaluation - Product forms - Statistic analysis - Three-dimensional model

Classification code: 408 Structural Design - 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 902.1 Engineering Graphics

DOI: 10.4028/www.scientific.net/AMR.651.564

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130716030108

Title: A search process for appropriate running of adjacent metro trains within stations based on genetic algorithm

Authors: Hei, Xinhong^{1, 2} ; Li, Yuxiang¹ ; Wang, Lei¹ ; Ma, Qiaomei¹/黑新宏;李玉祥;王磊;

Author affiliation:

1 School of Computer Science and Technology, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Rail Traffic Control and Safety, Beijing Jiaotong University, Beijing 100044, China

Corresponding author: Hei, X. (heixinhongjp@yahoo.co.jp)

Source title: IEEJ Transactions on Electrical and Electronic Engineering

Abbreviated source title: IEEJ Trans. Electr. Electron. Eng.

Volume: 8

Issue: 2

Issue date: March 2013

Publication year: 2013

Pages: 173-181

Language: English

ISSN: 19314973

E-ISSN: 19314981

Document type: Journal article (JA)

Publisher: John Wiley and Sons Inc., 111 River Street, Hoboken, NJ 07030-5774, United States

Abstract: To improve the efficiency of adjacent metro trains entering and leaving a station, we propose an improved genetic algorithm (IGA) which introduces a combinational mutation strategy to the classical genetic algorithm. Based on this algorithm, the running processes of adjacent metro trains within stations are optimized. The process is primarily divided into three stages: posterior trains entering the station, posterior trains stopping at the station, and previous trains leaving the station. These stages are principally influenced by four factors: the acceleration and initial speed of the posterior train entering the station; the time when the previous train leaves the station; and the acceleration of the previous train leaving the station. Moreover, there are certain coupling features and relationships among these factors. How to search for the optimal values of these factors is the issue to be discussed in this paper. Experiment results show that we can obtain an optimal solution in the space established by a suitable combination of values for these factors, and that the IGA is potentially useful for optimization design. © 2013 Institute of Electrical Engineers of Japan.

Number of references: 9

Main heading: Genetic algorithms

Controlled terms: Optimal systems - Optimization

Uncontrolled terms: Coupling feature - Initial speed - Metro train - Mutation strategy - Optimal solutions - Optimal values - Optimization design - Running process - Search process

Classification code: 723 Computer Software, Data Handling and Applications - 921 Mathematics - 921.5 Optimization Techniques

DOI: 10.1002/tee.21837

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130716026383

Title: The THz emission properties of GaAs photoconductive antenna with strong electric fields

Authors: Hong, Xue1, 2/;

Author affiliation:

1 School of Physics and Electrical Engineering, Weinan Teachers University, Weinan 714000, China

2 Department of Applied Physics, Xian University of Technology, Xian 710048, China

Corresponding author: Hong, X.

Source title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Abbreviated source title: Int. Symp. Antennas, Propag. EM Theory, ISAPE

Monograph title: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012

Issue date: 2012

Publication year: 2012

Pages: 1188-1191
 Article number: 6408990
 Language: English
 ISBN-13: 9781467317993
 Document type: Conference article (CA)
 Conference name: 2012 10th International Symposium on Antennas, Propagation and EM Theory, ISAPE 2012
 Conference date: October 22, 2012 - October 26, 2012
 Conference location: Xi'an, China
 Conference code: 95470
 Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
 Abstract: The terahertz (THz) emission properties of GaAs photoconductive antennas with strong electric fields are discussed; the transient transport characteristics of non-equilibrium carriers (hot electrons) within the photoconductive antenna were comparatively analyzed. It is shown that there are significant differences in the average drift velocity variation with strong and weak electric field. In the initial phase, optical wave scattering is mainly caused by small-angle scattering, carriers are accelerated by ballistic transport to reach higher electron energy in a shorter time, and the transient drift-velocity quickly rises, which is a main reason of the stronger THz radiation. © 2012 IEEE.
 Number of references: 12
 Main heading: Terahertz waves
 Controlled terms: Antennas - Electric fields - Gallium arsenide - Microwave antennas - Semiconducting gallium
 Uncontrolled terms: Ballistic transports - Drift velocities - Electron energies - GaAs - Non-equilibrium carriers - Optical wave scattering - Photoconductive antennas - Significant differences - Small-angle scattering - Strong electric fields - Terahertz emissions - Terahertz radiation - THz emission - THz radiation - Transient transport
 Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 711 Electromagnetic Waves - 712.1.1 Single Element Semiconducting Materials - 716 Telecommunication; Radar, Radio and Television - 804 Chemical Products Generally
 DOI: 10.1109/ISAPE.2012.6408990
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 5.
 Accession number: 20130816046019
 Title: Clonal selection multispectral image fusion based on CP and contourlets
 Authors: Jin, Haiyan1 ; Li, Shuai1/金海燕;李帅
 Author affiliation:
 1 Xi'an University of Technology, Xi'an, 710048, China
 Corresponding author: Jin, H. (jinhaiyan@xaut.edu.cn)
 Source title: International Journal of Advancements in Computing Technology
 Abbreviated source title: Intl. J. Adv. Comput. Technolog.
 Volume: 5

Issue: 3
 Issue date: 2013
 Publication year: 2013
 Pages: 250-258
 Language: English
 ISSN: 20058039
 E-ISSN: 22339337
 Document type: Journal article (JA)
 Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of
 Abstract: How to obtain valid fusion coefficients is the key problem in image fusion processing. In terms of the characters of multispectral images, contrast pyramid (CP) and contourlets are constructed to filter the images. Furthermore, a kind of evolution computation idea-immune clonal selection algorithm is introduced into image fusion processing to optimize the fusion coefficients for better fusion results. Fusion performance is evaluated through subjective inspection, as well as objective fusion performance measurements. Simulation results of multispectral images clearly demonstrate the superiority of this new approach. When compared to conventional wavelets and contourlet systems, Information entropy (IE) values keep at a high level; average grads (AG) values increase averagely about 2.1 and 1.1, respectively; standard deviation (STD) values increase averagely about 3.4 and 1.9, respectively; computing efficiencies increase averagely about 34% and 54%, respectively.
 Number of references: 13
 Main heading: Image fusion
 Controlled terms: Image classification
 Uncontrolled terms: Clonal selection - Clonal selection algorithms - Computing efficiency - Contourlet transform - Contourlets - Evolution computation - Fusion coefficients - Fusion performance - Image fusion processing - Immune clonal selections - Information entropy - Multi-spectral image fusions - Multispectral images - New approaches - Standard deviation
 Classification code: 716 Telecommunication; Radar, Radio and Television - 723.2 Data Processing and Image Processing
 DOI: 10.4156/ijact.vol5.issue3.29
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 6.
 Accession number: 20130816046134
 Title: The research on pulsed eddy current in non-destructive testing for metal casing
 Authors: Wang, Xue-long^{1, 3} ; Song, Xi-Jin² ; Zhang, Jing¹/王学龙;;张璟
 Author affiliation:
 1 School of Computer Science and Engineering, Xi'an University of Technology, China
 2 Electronic Engineering School, Xi'an Shiyou University, China
 3 School of Computer Science, Xi'an Shiyou University, China
 Corresponding author: Song, X. J. (sxj3029@126.com)
 Source title: Journal of Convergence Information Technology

Abbreviated source title: J. Convergence Inf. Technol.
 Volume: 8
 Issue: 3
 Issue date: 2013
 Publication year: 2013
 Language: English
 ISSN: 19759320
 E-ISSN: 22339299
 Document type: Journal article (JA)
 Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of
 Abstract: The casing defect concludes both mechanical and chemical damage, which has large influence and damage on well safety or oil and gas bearing layers. Based on the basic principles of pulsed eddy current technology, this paper proposed the ideas of the non-destructive testing for metal casing. This method uses a bipolar pulse as an incentive, the detection signal includes the casing response for multiple frequency. So it can get broadband detection. By ANSYS finite element simulation software, the induced electromotive force in receiving coils is numerical calculated. Furthermore, this paper in-depth studies the characteristics of electromagnetic response for cavity damage and cracks in metal casing. This has laid a good foundation for qualitative grasp the casing damage conditions.
 Number of references: 11
 Main heading: Nondestructive examination
 Controlled terms: Electromotive force - Petroleum deposits
 Uncontrolled terms: Ansys finite elements - Basic principles - Bearing layers - Bipolar pulse - Broadband detection - Casing - Casing damage - Chemical damages - Current pulse - Detection signal - Electromagnetic response - In-depth study - Induced electromotive force - Metal casing - Multiple frequency - Non destructive testing - Oil and gas - Pulsed eddy current - Receiving coil
 Classification code: 421 Strength of Building Materials; Mechanical Properties - 512.1 Petroleum Deposits - 801.4.1 Electrochemistry
 DOI: 10.4156/jcit.vol8.issue3.43
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 7.
 Accession number: 20130716029085
 Title: Sol-gel preparation of La-doped bismuth ferrite thin film and its low-temperature ferromagnetic and ferroelectric properties
 Authors: Yan, Fuxue¹ ; Zhao, Gaoyang¹ ; Song, Na¹/严富学;赵高扬;宋娜
 Author affiliation:
 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
 Corresponding author: Zhao, G. (zhaogy@xaut.edu.cn)
 Source title: Journal of Rare Earths
 Abbreviated source title: J Rare Earth

Volume: 31
 Issue: 1
 Issue date: January 2013
 Publication year: 2013
 Pages: 60-64
 Language: English
 ISSN: 10020721
 CODEN: JREAE6
 Document type: Journal article (JA)
 Publisher: Chinese Rare Earth Society, 2 Xijiekouwai Dajie, Beijing, 100088, China
 Abstract: Bi_{0.85}La_{0.15}FeO₃ thin film was prepared on ATO glass substrates by sol-gel technique. The effect of La doping on phase structure, film surface quality, ion valence, and ferroelectric/magnetic properties of Bi_{0.85}La_{0.15}FeO₃ film were investigated. La doping suppressed the formation of impurity phases and the transition of Fe³⁺ to Fe²⁺ ions at room temperature. Compared with the un-doped BiFeO₃, La-doping also increased the average grain size and the film density, which resulted in the decrease of film leakage current density. The remanent polarization and saturation magnetization were enhanced significantly by La doping. The remanent polarization of Bi_{0.85}La_{0.15}FeO₃ films gradually decreased while saturation magnetization increased with the decrease of measuring temperature within a range from 50 to 300 K. © 2013 The Chinese Society of Rare Earths.
 Number of references: 26
 Main heading: Film preparation
 Controlled terms: Iron oxides - Rare earths - Remanence - Saturation magnetization - Semiconductor doping - Sol-gel process - Sol-gels - Substrates - Thin films
 Uncontrolled terms: Average grain size - Bismuth ferrites - Ferroelectric property - Film density - Glass substrates - Impurity phasis - La doping - Low temperatures - Measuring temperature - Multiferroic materials - Room temperature - Sol gel preparations - Sol-gel technique
 Classification code: 708.4 Magnetic Materials - 712.1 Semiconducting Materials - 714.2 Semiconductor Devices and Integrated Circuits - 804 Chemical Products Generally - 804.2 Inorganic Compounds - 813.1 Coating Techniques
 DOI: 10.1016/S1002-0721(12)60235-X
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 8.
 Accession number: 20130816046139
 Title: Safety program for campus network application system
 Authors: Yang, Peng¹; Wei, Wei²; Shen, Peiyi³; Fan, Li⁴; Wang, Wei²; Wang, Feng²; Song, Xin²; Wang, Zhixiao²; Wang, Yongchao²; Geng, Jiachen²/杨鹏;魏巍;沈沛意;范黎;王伟;宋昕;王志晓;王勇超;耿嘉晨
 Author affiliation:
 1 Department of Information Engineering, Shaanxi Polytechnic Institute, Shaanxi, Xian'yang, 712000, China

2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

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4 Department of Pharmaceutical Chemistry and Analysis, School of Pharmacy, Fourth Military Medical University, Xian, Shaanxi 710032, China

Corresponding author: Yang, P. (ypeng791123@yahoo.com.cn)

Source title: Journal of Convergence Information Technology

Abbreviated source title: J. Convergence Inf. Technol.

Volume: 8

Issue: 3

Issue date: 2013

Publication year: 2013

Language: English

ISSN: 19759320

E-ISSN: 22339299

Document type: Journal article (JA)

Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of

Abstract: Nowadays, campus network is faced with varieties of security threats during the operation This thesis analyses securities and access control system of applications in campus network, then it puts forward a safe strategy which can be in security defense system and applications in campus network.

Number of references: 31

Main heading: Network security

Controlled terms: Computer networks - Hardware - Information science

Uncontrolled terms: Campus network - Safety programs - Security defense - Security planning - Security threats

Classification code: 605 Small Tools and Hardware - 723 Computer Software, Data

Handling and Applications - 903 Information Science

DOI: 10.4156/jcit.vol8.issue3.48

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130716029259

Title: Corrosion resistance of composite coating on magnesium alloy using combined microarc oxidation and inorganic sealing

Authors: Yang, Wei¹ ; Wang, Ai-Ying¹ ; Jiang, Bai-Ling²/杨巍;王爱英;蒋百灵

Author affiliation:

1 Ningbo Institute of Materials Technology and Engineering, Chinese Academy of Sciences, Ningbo 315201, China

2 School of Material Science and Engineering, Xi'An University of Technology, Xi'an 710048, China

Corresponding author: Yang, W. (yangwei_smx@nimte.ac.cn)

Source title: Transactions of Nonferrous Metals Society of China (English Edition)

Abbreviated source title: Trans Nonferrous Met Soc China

Volume: 22

Issue: SUPPL.3

Issue date: December 2012

Publication year: 2012

Pages: s760-s763

Language: English

ISSN: 10036326

CODEN: TNMCEW

Document type: Journal article (JA)

Publisher: Nonferrous Metals Society of China, B12 Fuxing Road, Beijing, 100814, China

Abstract: The combined microarc oxidation (MAO) and inorganic sealing process was used to deposit a composite coating to improve the corrosion resistance of AZ31 magnesium alloy. The surface morphologies of the resulting duplex coatings were studied by SEM. Furthermore, the corrosion resistance of the coated Mg alloy substrates was investigated using electrochemical workstation and dropping corrosion test. The results show that the composite coating surface consists of Mg, Si, O and Na. It is difficult to deposit inorganic coating on a thick MAO coating surface. As the composite coating was solidified by CO₂ under 175 °C, it exhibits a better corrosion resistance than the MAO monolayer, owing to the thick and compact inorganic coating.
© 2012 The Nonferrous Metals Society of China.

Number of references: 15

Main heading: Corrosion resistance

Controlled terms: Carbon dioxide - Composite coatings - Deposits - Inorganic coatings - Magnesium alloys - Microstructure - Monolayers

Uncontrolled terms: AZ31 magnesium alloy - Corrosion tests - Duplex coatings - MAO coatings - Mg alloy - Microarc oxidation - Sealing process

Classification code: 951 Materials Science - 933 Solid State Physics - 813.2 Coating Materials - 804.2 Inorganic Compounds - 617 Turbines and Steam Turbines - 612 Engines - 542.2 Magnesium and Alloys - 539.1 Metals Corrosion - 532 Metallurgical Furnaces

DOI: 10.1016/S1003-6326(12)61800-7

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130816045919

Title: Migration existing system to SaaS model

Authors: Zhu, Yangpeng^{1, 2}; Zhang, Jing²/朱养鹏;张璟

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Economic and Management, Xi'an Shiyou University, Xi'an 710065, China

Corresponding author: Zhu, Y. (zyp_hello@126.com)

Source title: Advances in Information Sciences and Service Sciences

Abbreviated source title: Adv. Inf. Sci. Serv. Sci.

Volume: 5
Issue: 3
Issue date: 2013
Publication year: 2013
Pages: 243-251
Language: English
ISSN: 19763700
E-ISSN: 22339345
Document type: Journal article (JA)
Publisher: Advanced Institute of Convergence Information Technology, Myoungbo Bldg 3F,, Bumin-dong 1-ga, Seo-gu, Busan, 602-816, Korea, Republic of
Abstract: In order to easily convert existing application to multi-tenant Software as a Service model, a Java migration platform is proposed. Firstly, the existing application is embed into the conversion platform and the single-tenant database was transformed to multi-tenant database by database transformation function. Secondly, each tenant's operation and data access was isolated in business and database layer by tenant filter function. Thirdly, combined with the certification and configuration functions in the SaaS conversion platform, the original system was converted to support multi-tenant SaaS system based on cloud computing with fer resource code updates. At last, a restaurant management system was migrated and functions and performances tests were taken to the migrated SaaS system. The results showed that the transformation had a lower manual workload, a shorter transformation lifecycle and a higher utilization of server resources.
Number of references: 17
Main heading: Software as a service (SaaS)
Controlled terms: Cloud computing - Database systems - Java programming language - Web services
Uncontrolled terms: Configuration function - Data access - Database layer - Database transformation - Existing systems - Filter function - Management systems - Migration - Multi tenants - Multi-tenant database - Original systems - Server resources
Classification code: 722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications
DOI: 10.4156/AISS.vol5.issue3.29
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
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2013-03-09 新增 23 条

1.

Accession number: 20130916060989

Title: Reactant concentration and carbonization to the controllable fabrication of carbon aerogels

Authors: Feng, Yaning1 ; Ge, Liling1 ; Jiang, Bailing1 ; Miao, Lei2 ; Masaki, Tanemura3/冯亚宁; 葛利玲;蒋百灵;;

Author affiliation: 1 Xi'an University of Technology, No.5 Jinhua South Road, Xi'an 710048, China

2 Guangzhou Institute of Energy Conversion, Chinese Academy of Sciences, Guangzhou 510640, China

3 Department of Frontier Materials, Graduate School of Engineering, Nagoya Institute of Technology, Nagoya, 4668555, Japan

Corresponding author: Feng, Y. (ynfeng@xaut.edu.cn)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 743-744

Monograph title: Energy and Environment Materials

Issue date: 2013

Publication year: 2013

Pages: 20-23

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856062

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 95676

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: To improve the controllability of the fabrication of carbon aerogels, the effects of the concentration of the reactant (RF%) on the structural properties of organic resorcinol - formaldehyde (RF) gel and the effects of the carbonization temperature on nano-structure of carbon aerogels were discussed. The concentration of the reaction was turned from 5%,10%,20%,30%,40%,50%, 55% and 60% to prepare the samples. The RF aerogels were carbonized at temperature of 700°C, 900°C and 1050°C. The shrinkage and nitrogen gas adsorption were measured. Experimental results showed that the structural stability of the organic RF aerogel can be improved by decreasing the shrink in drying process and increasing the condensation of reactant in the starting solution to a certain value, such as 55%. The ordered pore size distribution of carbon aerogels with less structure defects is able to be produced through the effective particle fusing at the carbonization temperature as high as 1050°C. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Aerogels

Controlled terms: Carbon - Carbonization - Condensation - Gas adsorption - Phenols - Stability

Uncontrolled terms: Carbon aerogels - Carbonization temperatures - Drying process - Reactant concentrations - RF aerogels - Starting solutions - Structural stabilities - Structure defects

Classification code: 951 Materials Science - 931 Classical Physics; Quantum Theory;

Relativity - 804.1 Organic Compounds - 961 Systems Science - 804 Chemical Products
Generally - 802.2 Chemical Reactions - 801 Chemistry - 802.3 Chemical Operations
DOI: 10.4028/www.scientific.net/MSF.743-744.20

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20130916061869

Title: The simulation of rotary motion of the flexible multi-body dynamics of tower crane

Authors: Gao, Rong¹ ; Yang, Jing² ; Luo, Gang¹ ; Yan, Congxun³;;杨静;;

Author affiliation: 1 Chengdu Technological University, Sichuan Chengdu 611730, China

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Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 655-657

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Conference name: 2012 3rd International Conference on Advances in Materials and
Manufacturing Processes, ICAMMP 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95671

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of
Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Based on Dynamics of Flexible Multi-body theories, the flexible multi-body model of
tower crane is established, by using the module of ADAMS/FLEX. The vibration characteristics of
tower crane is analysed during the case of braking slewing motion by introducing the modal
neutral file of tower crane flexible jib and mast. Advices are given in this paper for the dynamic
analysis and the control design of tower crane. © (2013) Trans Tech Publications, Switzerland.

Number of references: 6

Main heading: Tower cranes

Controlled terms: Braking - Industrial engineering - Production engineering

Uncontrolled terms: Control design - Flexible bodies - Flexible multi bodies - Flexible
multi-body dynamics - MNF - Multi-body dynamic - Neutral files - ON dynamics -

Rotary motions - Slewing mechanism - Slewing motion - Vibration characteristics

Classification code: 602 Mechanical Drives and Transmissions - 693.1 Cranes - 912.1

Industrial Engineering - 913.1 Production Engineering

DOI: 10.4028/www.scientific.net/AMR.655-657.281

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20130916053124

Title: Numerical simulation of flow in centrifugal pump under cavitation and sediment condition

Authors: Guo, P.C.1, 2 ; Zheng, X.B.1, 2 ; Zhao, Q.1 ; Luo, X.Q.1, 2/郭鹏程;郑兴;赵钦;罗兴铨

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, No.5 South Jinhua Road, Xi'an, 710048, China

2 FINE Institute for Hydraulic Machinery, A-16F, Huaxing Times Plaza, No.478 Wensan Rd, Hangzhou, 310013, China

Corresponding author: Guo, P.C.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 3

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 1: Hydraulic Turbines and Pumps

Issue date: 2012

Publication year: 2012

Article number: 032056

Language: English

ISSN: 17551307

E-ISSN: 17551315

Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: The sediment concentration is very high in many rivers in the world, especially in China. The pumps that designed for the clear water are usually seriously abraded. The probability of pump cavitation is greatly enhanced due to the existence of sand. Under the joint action and mutual promotion of sand erosion and cavitation, serious abrasion could occurred, and the hydraulic performance of the pump may be greatly descended, meanwhile the safety and stability of the whole pump are greatly threatened. Therefore, it is significant to investigate the cavitation characteristic of pump under sediment flow condition. In this paper, the flow in a single stage centrifugal pump under clear water and sediment flow conditions was numerically simulated. The cavitation performance under clear water was firstly analyzed. Then, The pressure, velocity and solid particle distribution in centrifugal pump under different particle diameter and different particle concentration was investigated by using the two-fluid model; The area and

extent of erosion was illustrated by using the particle track model. Finally, the influence of mixed sand on centrifugal pump performance was investigated. © 2013 Published under licence by IOP Publishing Ltd.

Number of references: 6

Main heading: Cavitation

Controlled terms: Centrifugal pumps - Erosion - Hydraulic machinery - Pumps - Sedimentology - Sediments

Uncontrolled terms: Cavitation characteristics - Cavitation performance - Flow condition - Hydraulic performance - Joint actions - Particle concentrations - Particle diameters - Particle tracks - Pump cavitation - Safety and stabilities - Sand erosion - Sediment concentration - Single-stage centrifugal pumps - Solid particle distribution - Two fluid model

Classification code: 481.1 Geology - 483 Soil Mechanics and Foundations - 618.2 Pumps - 631.1.1 Liquid Dynamics - 632.2 Hydraulic Equipment and Machinery

DOI: 10.1088/1755-1315/15/3/032056

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20130816047344

Title: The impact of improving irrigation efficiency on wetland distribution in an agricultural landscape in the upper reaches of the Yellow River in China

Authors: Jia, Z.1 ; Wu, Z.1 ; Luo, W.1 ; Xi, W.1 ; Tang, S.1 ; Liu, W.L.1 ; Fang, S.1/;;;;;

Author affiliation: 1 State Key Laboratory of Eco-hydraulic Engineering in Shaanxi, Xi'an University of Technology, China

Corresponding author: Jia, Z. (zjia@mail.xaut.edu.cn)

Source title: Agricultural Water Management

Abbreviated source title: Agric. Water Manage.

Volume: 121

Issue date: April 2013

Publication year: 2013

Pages: 54-61

Language: English

ISSN: 03783774

CODEN: AWMADF

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Wetlands in irrigated agricultural areas have great environmental benefits as agricultural pollution sinks; but agricultural development and water resources redistribution have caused these wetlands to diminish rapidly worldwide. This is the case in the YinNan Irrigation District (YNID) in the upper reaches of the Yellow River in China, where wetlands once flourished as the result of large amount of irrigation diversion and low irrigation efficiency. In this paper, we presented an analytical study on the impact of irrigation water saving practices on wetland distribution in YNID; we also discussed the effect of considering wetland water consumption as beneficial or efficient use on the overall water use efficiency. The study area has a maximal

wetland to farmland areal ratio of 10.5% during the irrigation season due to recharges from canal seepage and field percolation; and 45% of the wetland area remains as the permanent pool area during the non-irrigation season. The observed maximum water table rise in the irrigation season is 1.5. m. The current irrigation system efficiency in YNID is 0.30, which is a product of the field level efficiency of 0.68 and the conveyance efficiency of 0.44. Our analysis presented in this paper shows that improving the application efficiency to 0.90 at the field level will reduce the maximum water table rise by 0.53. m, causing the wetland area to shrink by 17% and the subsequent wetland water consumption to decrease by 11%; further improving conveyance efficiency to 0.60 will reduce the maximum water table rise by 0.95. m, causing the wetland area to shrink by 30% and the subsequent wetland water consumption to decrease by 19%. These results indicate that water saving at the conveyance level will have greater impact on wetland water use than that at the field level. If wetland water consumption is considered as efficient use, this fraction of the irrigation water loss becomes efficient use, which will increase the system efficiency proportionally by the percentage of wetland water consumption. The amount of wetlands, and thus additional beneficial wetland water use, is directly dependent on the amount of traditional water losses, such as wetland consumption here. The key question then becomes: where lies the optimum level or the acceptable balance between increasing efficiencies at irrigation scheme level while providing optimal beneficial use for wetlands. © 2013 Elsevier B.V.

Number of references: 20

Main heading: Wetlands

Controlled terms: Efficiency - Groundwater - Irrigation - Pollution control - Reservoirs (water) - River diversion - Solvents - Water conservation - Water pollution - Water resources - Water supply

Uncontrolled terms: Conveyance level - Field level - Irrigation efficiency - Water - savings - Water loss

Classification code: 913.1 Production Engineering - 821.3 Agricultural Methods - 803 Chemical Agents and Basic Industrial Chemicals - 454.2 Environmental Impact and Protection - 453 Water Pollution - 446.1 Water Supply Systems - 444.2 Groundwater - 444 Water Resources - 442.2 Land Reclamation - 441.2 Reservoirs - 441 Dams and Reservoirs; Hydro Development

DOI: 10.1016/j.agwat.2013.01.003

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20130916053447

Title: Experimental study on the flow of a mixed flow pump impeller

Authors: Lu, J.L.1, 2 ; Guo, P.C.1, 2 ; Feng, J.J.1, 2 ; Luo, X.Q.1, 2/卢金玲;郭鹏程;;罗兴铨

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, No.5 South Jinhua Road, Xi'an 710048, China

2 FINE Institute for Hydraulic Machinery, Huaxing Times Plaza, No.478 Wensan Rd, Hangzhou 310013, China

Corresponding author: Lu, J.L.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 6

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 4:
Advances in Computational and Experimental Techniques

Issue date: 2012

Publication year: 2012

Article number: 062051

Language: English

ISSN: 17551307

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Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: Mixed flow pump is widely used in many fields, the performance of the whole pump is affected by the flow in the impeller to a great extent. To make clear the flow phenomena in the mixed flow impeller at design and off-design flow rate condition, a mixed flow unshrouded impeller was manufactured and the flow in the impeller at design and off-design flow rate was experimentally measured by Particle Image Velocimetry (PIV) in this paper. In the experiment test device, the volute was specially designed and manufactured by transparent material. According to the experimental result, the distribution of time-average relative velocity showed the velocity near blade pressure surface at design flow rate decreases and then increases from inlet to outlet of the impeller, and that near blade suction surface increases and then decreases. The velocity near the suction surface decreases from hub to casing, and the minimal velocity appears near the casing and suction surface. Near the impeller outlet, the relative velocity near blade pressure surface varies a little along the span direction; Back-flow phenomena were found at passages outlet near casing and mid-span sections at partial flow rate. To clarify the effect of volute geometry on the velocity distribution, the flow in different impeller passages relative to the volute tongue was tested and the result showed that the velocity distribution in different passages was similar. © Published under licence by IOP Publishing Ltd.

Number of references: 7

Main heading: Impellers

Controlled terms: Design - Flow rate - Hydraulic machinery - Velocity - Velocity distribution

Uncontrolled terms: Blade pressure - Blade suction surface - Design flow rate - Experiment tests - Experimental studies - Flow Phenomena - Flow rate conditions - Impeller outlet - Impeller passage - Mixed flow pump - Mixed flows - Mixed-flow impeller - Mixed-flow pump impellers - Off designs - Partial flow rate - Particle image velocimetries - Relative velocity - Suction surfaces - Time-averages - Transparent material - Unshrouded impellers

Classification code: 408 Structural Design - 601.2 Machine Components - 631 Fluid Flow

- 632.2 Hydraulic Equipment and Machinery - 931.1 Mechanics - 931.3 Atomic and Molecular Physics

DOI: 10.1088/1755-1315/15/6/062051

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20130916060496

Title: Influence of intermediate principal stress on bearing capacity of metallic cantilever beams

Authors: Ma, Zong-Yuan¹; Liao, Hong-Jian²; Dang, Fa-Ning¹/马宗源;廖红建;党发宁

Author affiliation: 1 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

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Corresponding author: Ma, Z.-Y. (mzy_gogo@hotmail.com)

Source title: Gongcheng Lixue/Engineering Mechanics

Abbreviated source title: Gongcheng Lixue

Volume: 30

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 307-313

Language: Chinese

ISSN: 10004750

CODEN: GOLIEB

Document type: Journal article (JA)

Publisher: Tsinghua University, Tsinghua University Xueyan Plaza, 100084, China

Abstract: The influence of the intermediate principal stress on the bearing capacity for a rectangular and metallic cantilever beam was analyzed using the explicit finite difference method and twin shear unified strength theory. The distribution of plastic strain for a cantilever beam under the limit load state is near two symmetry triangles. The influence of the intermediate principal stress on the bearing capacity of a metallic cantilever beam is related to the beam thickness. The influence of the intermediate principal stress on a plane stress beam is lower than that of a plane strain beam. The influence of the intermediate principal stress on the bearing capacity of a plane strain beam is independent of the beam length. The influence of the intermediate principal stress on the bearing capacity of a plane stress beam is increased firstly and decreased secondly with the beam length increased.

Number of references: 13

Main heading: Cantilever beams

Controlled terms: Bearing capacity

Uncontrolled terms: A-plane - Beam length - Beam thickness - Explicit finite difference method - Intermediate principal stress - Lagrangian finite differences - Limit Load - Metallic cantilever - Strength theory - Twin shear unified strength theory

Classification code: 408.2 Structural Members and Shapes - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.6052/j.issn.1000-4750.2011.07.0438

Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130916053079

Title: Hydraulic design of a low-specific speed Francis runner for a hydraulic cooling tower

Authors: Ruan, H.1 ; Luo, X.Q.1, 2 ; Liao, W.L.1 ; Zhao, Y.P.1/;罗兴铸;廖伟丽;

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, Xi'an 710048, China

2 FINE Institute for Hydraulic Machinery, Hangzhou 310013, China

Corresponding author: Ruan, H. (ruanhui2012@hotmail.com)

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 3

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 1:
Hydraulic Turbines and Pumps

Issue date: 2012

Publication year: 2012

Article number: 032011

Language: English

ISSN: 17551307

E-ISSN: 17551315

Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: The air blower in a cooling tower is normally driven by an electromotor, and the electric energy consumed by the electromotor is tremendous. The remaining energy at the outlet of the cooling cycle is considerable. This energy can be utilized to drive a hydraulic turbine and consequently to rotate the air blower. The purpose of this project is to recycle energy, lower energy consumption and reduce pollutant discharge. Firstly, a two-order polynomial is proposed to describe the blade setting angle distribution law along the meridional streamline in the streamline equation. The runner is designed by the point-to-point integration method with a specific blade setting angle distribution. Three different ultra-low-specificspeed Francis runners with different wrap angles are obtained in this method. Secondly, based on CFD numerical simulations, the effects of blade setting angle distribution on pressure coefficient distribution and relative efficiency have been analyzed. Finally, blade angles of inlet and outlet and control coefficients of blade setting angle distribution law are optimal variables, efficiency and minimum pressure are objective functions, adopting NSGA-II algorithm, a multi-objective optimization for ultra-low-specific speed Francis runner is carried out. The obtained results show that the optimal runner has higher efficiency and better cavitation performance. © 2013 Published under licence

by IOP Publishing Ltd.

Number of references: 5

Main heading: Cooling

Controlled terms: Blowers - Computational fluid dynamics - Cooling towers - Energy utilization - Hydraulic machinery - Hydraulic turbines - Multiobjective optimization

Uncontrolled terms: Air blowers - Blade angle - Cavitation performance - CFD numerical simulations - Control coefficients - Cooling cycle - Electric energies - Higher efficiency - Hydraulic designs - Minimum pressure - Multi objective optimizations (MOO) - NSGA-II algorithm - Objective functions - Optimal variables - Point-to-point integrations - Pollutant discharges - Pressure coefficient distribution - Relative efficiency - Remaining energies - Setting angles

Classification code: 921.5 Optimization Techniques - 802.1 Chemical Plants and Equipment - 641.2 Heat Transfer - 921.6 Numerical Methods - 632.2 Hydraulic Equipment and Machinery - 617.1 Hydraulic Turbines - 525.3 Energy Utilization - 618.3 Blowers and Fans

DOI: 10.1088/1755-1315/15/3/032011

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20130916060780

Title: A new method for characteristic analysis of the mechanical structure joint

Authors: Shi, Kun¹ ; Song, Li¹ ; Shi, Junping¹ ; Wei, Fengtao¹ ; Yuan, Yuan¹/石坤;宋俐;师俊平;魏锋涛;原园

Author affiliation: 1 School of Mechanical and Precise Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Shi, K. (shikun@xaut.edu.cn)

Source title: Jixie Gongcheng Xuebao/Journal of Mechanical Engineering

Abbreviated source title: Jixie Gongcheng Xuebao

Volume: 49

Issue: 1

Issue date: 2013

Publication year: 2013

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Language: Chinese

ISSN: 05776686

CODEN: CHHKA2

Document type: Journal article (JA)

Publisher: Editorial Office of Chinese Journal of Mechanical, 22 Baiwanzhuang Dajie, Beijing, 100037, China

Abstract: To resolve the discontinuous displacement problem in the joint, a new analysis method based on the interface stress element is proposed. Since the interface stress element method uses a piecewise rigid-body displacement field, the displacement along the structural interface is allowed to be discontinuous, which is beneficial to analyze the discontinuous structure without setting any interlayer elements. According to the Hertz theory and the relation

between the normal load and the normal deformation of the asperity, the equivalent elasticity modulus in the joint is deduced by the fitting formula of the joint. Under the condition of the stress wave propagation in a discrete element, the relation between the normal stiffness and the tangential stiffness of the joint is obtained. Furthermore, the equivalent Poisson ratio is deduced by the fitting formula of the joint. To verify the effectiveness of the propose analysis method, this method is applied to a mechanical structure including joints. The comparison between the theoretical and experimental results validates the feasibility of the proposed method. The results presented in this work can be considered as a stepping stone to be used toward the further research of the joint problem. ©2013 Journal of Mechanical Engineering.

Number of references: 18

Main heading: Rigid structures

Controlled terms: Joints (structural components) - Stiffness - Stresses

Uncontrolled terms: Analysis method - Characteristic analysis - Discontinuous displacement - Discontinuous media mechanics - Discrete elements - Displacement field - Equivalent elasticity modulus - Fitting formula - Hertz theory - Interface stress element method - Interface stress elements - Mechanical structures - Normal deformations - Normal loads - Normal stiffness - Piece-wise - Rigid body - Stepping stone - Stress wave propagation - Structural interface - Tangential stiffness - Theoretical and experimental

Classification code: 408 Structural Design - 408.2 Structural Members and Shapes - 421

Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials;

Test Equipment and Methods - 951 Materials Science

DOI: 10.3901/JME.2013.01.142

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20130916062024

Title: Vibration analysis of tendon-based parallel robot for processing

Authors: Tang, Aofei¹ ; Li, Yan¹ ; Kong, Lingfei¹ ; Cheng, Xiaojuan¹/汤奥斐;李言;孔令飞;程晓娟;

Author affiliation: 1 School of Mechanical and Precision Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Tang, A. (tangaofei@xaut.edu.cn)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 655-657

Monograph title: Engineering Solutions for Manufacturing Processes

Issue date: 2013

Publication year: 2013

Pages: 1086-1091

Language: English

ISSN: 10226680

ISBN-13: 9783037856482

Document type: Conference article (CA)

Conference name: 2012 3rd International Conference on Advances in Materials and Manufacturing Processes, ICAMMP 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95671

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The vibration characteristics of the tendon-based parallel robot for processing are presented. Firstly, the free vibration equations of the robot on the stable position and orientation were modeled, and secondly the natural frequencies were deduced from the transformation of principal coordinates into modal coordinates. Next, cutting-force model was introduced and the solutions of the forced vibration equations were obtained from the Runge-Kutta method, where the minimum natural frequency was taken as basis of the time step that was important for computation convergence. Lastly, the algorithm was verified by simulations, also including solution transformation of time domain into frequency domain by Fast Fourier Transformation (FFT). The vibration properties could be manifested clearly by the solutions in frequency domain. The results show that the eccentricity and the mass of the moving platform are the important factors to make system instable in certain excitation frequency. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Tendons

Controlled terms: Algorithms - Fast Fourier transforms - Frequency domain analysis - Industrial engineering - Modal analysis - Natural frequencies - Production engineering - Robots - Runge Kutta methods - Vibration analysis

Uncontrolled terms: Cutting forces - Excitation frequency - Fast fourier transformation (FFT) - FFT algorithm - Forced vibration - Free vibration - Frequency domains - Minimum natural frequencies - Modal coordinates - Moving platform - Parallel robots - Position and orientations - Principal coordinates - Time domain - Time step - Vibration characteristics - Vibration properties

Classification code: 943.2 Mechanical Variables Measurements - 921 Mathematics - 913.1 Production Engineering - 912.1 Industrial Engineering - 731.5 Robotics - 711.1 Electromagnetic Waves in Different Media - 461.2 Biological Materials and Tissue Engineering

DOI: 10.4028/www.scientific.net/AMR.655-657.1086

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20130916069481

Title: Microstructure and wear properties of in-situ production of (Fe,Cr)7C3 particulate bundles reinforced iron matrix composites

Authors: Tian, Jinglai¹; Ye, Fangxia²; Zhong, Lisheng³; Xu, Yunhua²/田景来¹;;;

Author affiliation: 1 School of Metallurgical Engineering, Xian University of Architecture and Technology, Xian, China

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3 Institute of Wear-resistance Materials, Xian University of Architecture and Technology, Xian, China

Corresponding author: Tian, J. (tjl79@eyou.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 652-654

Monograph title: Advances in Materials and Materials Processing

Issue date: 2013

Publication year: 2013

Pages: 64-68

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ISBN-13: 9783037856208

Document type: Conference article (CA)

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Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95667

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In-situ production of (Fe,Cr)₇C₃ particulate bundles-reinforced iron matrix composites were prepared by infiltration casting between Cr wires and white cast iron at 1200°C plus subsequent heat treatment. The composites prepared under different heat treatment time were characterized by X-ray diffraction (XRD), scanning electron microscopy (SEM), macrohardness test and pin-on-disc wear resistance test. The results show that the composite is mainly consist of (Fe,Cr)₇C₃ carbides and γ -Fe. The area of the particulate bundles gradually increases with the increase of heat treatment time, the microstructure evolved from eutectic to hypoeutectic, and the morphologies of the reinforcements present chrysanthemum-shaped, granular and intercrystalline eutectics, respectively. The (Fe,Cr)₇C₃ particulate bundles reinforced composite has high macrohardness and excellent wear resistance under dry sliding wear testing conditons. © (2013) Trans Tech Publications, Switzerland.

Number of references: 17

Main heading: Particle reinforced composites

Controlled terms: Carbides - Composite materials - Eutectics - Heat treatment - Microstructure - Reinforcement - Sandwich structures - Scanning electron microscopy - Wear resistance - X ray diffraction

Uncontrolled terms: Dry sliding wear - Heat treatment time - In-situ - In-situ production - Infiltration casting - Intercrystalline - Iron matrix composites - Macro-hardness - Particulate bundles - Pin on disc - Reinforced composites - Wear properties - White cast irons

Classification code: 931.3 Atomic and Molecular Physics - 812.1 Ceramics - 801.4 Physical Chemistry - 951 Materials Science - 741.1 Light/Optics - 421 Strength of

Building Materials; Mechanical Properties - 415 Metals, Plastics, Wood and Other Structural Materials - 537.1 Heat Treatment Processes

DOI: 10.4028/www.scientific.net/AMR.652-654.64

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20130916061949

Title: Improvement and realization of miniature flexible gyro in the photoelectric platform

Authors: Wang, Ping¹; Yang, Jing¹; Yao, Junjun²/王平;杨静;

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, China

2 012 Base Military Representative Office, Hanzhong, China

Corresponding author: Wang, P. (hharmony@163.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 655-657

Monograph title: Engineering Solutions for Manufacturing Processes

Issue date: 2013

Publication year: 2013

Pages: 697-700

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Conference name: 2012 3rd International Conference on Advances in Materials and Manufacturing Processes, ICAMMP 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95671

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Generally, it was precession of flexible gyroscopic not gyroscopic nutation which was just considered in engineering design. However, in photoelectric stabilized platform, this nutation characteristics of angular position flexible gyro has been restricting the stabilized accuracy of platform seriously. In this paper, firstly the output characteristics of a miniature flexible gyro was measured by characteristic of gyroscopic motion, four main kinds of frequency components in output characteristics was analysed. The methods were realized in the miniature flexible gyroscope in the laboratory by adopting the two measures of the secondary trap circuit and improvement of torque component. Test results showed that, the improvements made nutation frequency of gyro and envelope at 40Hz converged fastly, and the output noise of gyro angular position was decayed to more than 15dB. In the end, the gyro was applied to chariot photoelectric stabilized platform, the isolation of platform and carrier got improved from 1~2mil to 0.3mil. © (2013) Trans Tech Publications, Switzerland.

Number of references: 5

Main heading: Gyroscopes

Controlled terms: Industrial engineering - Photoelectricity - Production engineering

Uncontrolled terms: Isolation - Nutation frequency - Skeleton - Torquer - Trap filter

Classification code: 741.1 Light/Optics - 912.1 Industrial Engineering - 913.1 Production Engineering - 943.1 Mechanical Instruments

DOI: 10.4028/www.scientific.net/AMR.655-657.697

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20130916062268

Title: A hybrid PSO algorithm for vehicle routing problem with simultaneous delivery and pickup

Authors: Wang, Sunxin^{1, 2}; Li, Yan¹; Zhang, Yanrong²;李言;

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, China

2 School of Technology, Xi'an University of Technology, Xi'an, China

Corresponding author: Wang, S. (wsx8280@126.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 655-657

Monograph title: Engineering Solutions for Manufacturing Processes

Issue date: 2013

Publication year: 2013

Pages: 2326-2330

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ISBN-13: 9783037856482

Document type: Conference article (CA)

Conference name: 2012 3rd International Conference on Advances in Materials and Manufacturing Processes, ICAMMP 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95671

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: In this paper a hybrid algorithm named IPSO-VND is proposed and applied to solving the vehicle routing problem with simultaneous pickup and delivery (VRPSPD). The IPSO-VND algorithm combines two meta-heuristics: Improved Particle Swarm Optimization (IPSO) is used to find a group of excellent solutions, and then the Variable Neighborhood Descent (VND) is implemented to deeply search to achieve the optimal solution around these solutions. During the IPSO procedure, in order to make up for the change of a particle's position, a velocity component

is added to the movement of any particle which has been optimized or made feasible. During the VND procedure, three different neighborhood structures: insertion, swap and cross are successively used. Computational results on the benchmark problems show that our IPSO-VND algorithm is effective. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Algorithms

Controlled terms: Industrial engineering - Network routing - Particle swarm optimization (PSO) - Production engineering - Routing algorithms

Uncontrolled terms: A-particles - Bench-mark problems - Computational results - Hybrid algorithms - Hybrid pso algorithms - Meta heuristics - Neighborhood structure - Optimal solutions - Pickup and delivery - Simultaneous pickup and deliveries - Variable neighborhood descents - Vehicle Routing Problems - Velocity components

Classification code: 721 Computer Circuits and Logic Elements - 723 Computer Software, Data Handling and Applications - 912.1 Industrial Engineering - 913.1 Production Engineering

DOI: 10.4028/www.scientific.net/AMR.655-657.2326

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130916053488

Title: Numerical investigation of hub clearance flow in a Kaplan turbine

Authors: Wu, H.1 ; Feng, J.J.1 ; Wu, G.K.1, 2 ; Luo, X.Q.1, 2;;吴广宽;罗兴铸

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, Xi'an, Shannxi, 710048, China

2 Fine Institute of Hydraulic Machinery, Zhejiang Fuchunjiang Hydropower Equipment Co., LTD., Hangzhou, 310013, Zhejiang, China

Corresponding author: Wu, H.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 7

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 5: Application in Industries and in Special Conditions

Issue date: 2012

Publication year: 2012

Article number: 072026

Language: English

ISSN: 17551307

E-ISSN: 17551315

Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: In this paper, the flow field considering the hub clearance flow in a Kaplan turbine has been investigated through using the commercial CFD code ANSYS CFX based on high-quality structured grids generated by ANSYS ICEM CFD. The turbulence is simulated by k- ω based shear stress transport (SST) turbulence model together with automatic near wall treatments. Four kinds of simulations have been conducted for the runner geometry without hub clearance, with only the hub front clearance, with only the rear hub clearance, and with both front and rear clearance. The analysis of the obtained results is focused on the flow structure of the hub clearance flow, the effect on the turbine performance including hydraulic efficiency and cavitation performance, which can improve the understanding on the flow field in a Kaplan turbine. © Published under licence by IOP Publishing Ltd.

Number of references: 5

Main heading: Computational fluid dynamics

Controlled terms: Flow fields - Hydraulic machinery - Kaplan turbines - Turbulence models

Uncontrolled terms: ANSYS-CFX - Cavitation performance - CFD codes - High quality - Hydraulic efficiency - Near-wall treatment - Numerical investigations - Shear-stress transport - Structured grid - Turbine performance

Classification code: 617.1 Hydraulic Turbines - 631 Fluid Flow - 632.2 Hydraulic Equipment and Machinery

DOI: 10.1088/1755-1315/15/7/072026

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20130916062263

Title: Relative structure on main influence factors of international trade of new energy materials

Authors: Xue, WeiXian¹; Guo, Rong¹/薛伟贤;郭蓉

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology, Xi'an, China

Corresponding author: Xue, W. (479095320@qq.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 655-657

Monograph title: Engineering Solutions for Manufacturing Processes

Issue date: 2013

Publication year: 2013

Pages: 2294-2298

Language: English

ISSN: 10226680

ISBN-13: 9783037856482

Document type: Conference article (CA)

Conference name: 2012 3rd International Conference on Advances in Materials and

Manufacturing Processes, ICAMMP 2012

Conference date: December 22, 2012 - December 23, 2012

Conference location: Beihai, China

Conference code: 95671

Sponsor: University of Wollongong, Australia; Northeastern University, China; University of Science and Technology Beijing; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: All domestic and foreign literatures on influence factors of international trade of new energy materials are statistically analyzed by using Meta-analysis method, and fourteen main influence factors are identified and extracted from previous research results. After that, the paper analyzes the relative structure among the fourteen factors by using interpretive structural model. The results show that export subsidy for new energy materials, import subsidy for new energy materials, insure subsidy, export drawback, export exemption, decreasing tariff for import, discount loan, import & export surety and revenue growth are superficial and direct influence factors; support fund growth, export tariff growth and import tariff growth are intermediate and indirect influence factors; interest of payment for import goods and interest of payment for export goods are essential and basic influence factors. This analysis is helpful to open out effect system and mechanism for international trade of new energy materials. © (2013) Trans Tech Publications, Switzerland.

Number of references: 10

Main heading: Growth (materials)

Controlled terms: Industrial engineering - International trade - Materials - Model structures - Production engineering

Uncontrolled terms: Effect system - Export subsidies - Import tariff - Influence factors - Interpretive structural models - Meta-analysis - New energies - Relative structure - Research results - Revenue growth

Classification code: 408 Structural Design - 902.3 Legal Aspects - 912.1 Industrial Engineering - 913.1 Production Engineering - 951 Materials Science

DOI: 10.4028/www.scientific.net/AMR.655-657.2294

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20130916053241

Title: EMD feature entropy based dynamic characteristic extraction of the draft tube of hydraulic turbines

Authors: Xue, Y.G.1 ; Luo, X.Q.1 ; Wang, H.1;/罗兴锜;

Author affiliation: 1 Institute of Water Resources and Hydropower Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xue, Y.G.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 4

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 2:

Sustainable Hydropower

Issue date: 2012

Publication year: 2012

Article number: 042009

Language: English

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Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: In this paper, the test data and storage management, data analysis and other aspects of the signal presented the turbine tube vibration system design ideas and methods. Describes a vibration analysis of tube effective method: Based on HHT spectrum of EMD turbine to extract the dynamic characteristics of information and software to be achieved. The results show that the method of high accuracy, and has a good feature vector extraction turbine capacity, suitable for analyzing complex and dynamic characteristics of turbine specific information; and the system has strong versatility and scalability, and achieve a good real-time performance. No. 1 in a hydropower station on the real machine test, experimental results show that the system can effectively monitor the vibration of the draft tube. © Published under licence by IOP Publishing Ltd.

Number of references: 26

Main heading: Information management

Controlled terms: Extraction - Hydraulic machinery - Hydraulic turbines - Tubes (components) - Vibration analysis

Uncontrolled terms: Design ideas - Draft tubes - Dynamic characteristics - Feature entropy - Feature vector extraction - Hydropower stations - Real time performance - Specific information - Test data - Tube vibration - Turbine capacity

Classification code: 616.1 Heat Exchange Equipment and Components - 617.1 Hydraulic Turbines - 632.2 Hydraulic Equipment and Machinery - 802.3 Chemical Operations - 903.2 Information Dissemination - 943.2 Mechanical Variables Measurements

DOI: 10.1088/1755-1315/15/4/042009

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20130916060774

Title: Calculation model of the normal contact stiffness of joints based on the fractal geometry and contact theory

Authors: Yang, Hongping¹ ; Fu, Weiping¹ ; Wang, Wen¹ ; Yang, Shiqiang¹ ; Li, Pengyang¹ ; Wang, Wei¹/杨红平;傅卫平;王雯;杨世强;李鹏阳;王伟

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an

University of Technology, Xi'an 710048, China

Corresponding author: Yang, H. (yanghp8@sohu.com)

Source title: Jixie Gongcheng Xuebao/Journal of Mechanical Engineering

Abbreviated source title: Jixie Gongcheng Xuebao

Volume: 49

Issue: 1

Issue date: 2013

Publication year: 2013

Pages: 102-107

Language: Chinese

ISSN: 05776686

CODEN: CHHKA2

Document type: Journal article (JA)

Publisher: Editorial Office of Chinese Journal of Mechanical, 22 Baiwanzhuang Dajie, Beijing, 100037, China

Abstract: Rough surface asperity parameters are characterized based on fractal geometry theory. Asperity normal contact stiffness model is developed based on contact mechanics that the deformation transitions from elastic, through elastic-plastic, to eventually to the plastic, respectively. The mechanical joints normal contact stiffness calculation model is presented based on fractal geometry and contact mechanics theory. In different plastic index, the model is developed the relationship between the joint normal contact load and contact stiffness. The result shows that plastic index is lesser, asperity is mainly elastic deformation, and the relationship between normal contact load and stiffness is the approximate linear, that, with the plastic index increase, asperity is mainly plastic deformation, and the relationship between normal contact load and stiffness is the strongly nonlinear. At last, normal contact stiffness which machining surface are milling and grinding are calculated and analyzed for existed experimental parameters used the model. The comparison result indicates that the present model is consistent with experiment result. ©2013 Journal of Mechanical Engineering.

Number of references: 21

Main heading: Geomechanics

Controlled terms: Deformation - Elastoplasticity - Fractals - Grinding (machining) - Stiffness

Uncontrolled terms: Asperity - Calculation models - Comparison result - Contact Mechanics - Contact stiffness - Contact theory - Elastic-Plastic - Experimental parameters - Fractal geometry - Fractal geometry theories - Machining surfaces - Mechanical joints - Normal contact stiffness - Normal contacts - Rough surfaces - Strongly nonlinear

Classification code: 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 481 Geology and Geophysics - 606.2 Abrasive Devices and Processes - 921 Mathematics - 951 Materials Science

DOI: 10.3901/JME.2013.01.102

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20130916054343

Title: Simulation and experiment research on deforming force of slab cold roll-beating

Authors: Yang, Mingshun1 ; Li, Yan1 ; Zheng, Jianming1 ; Yuan, Qilong1/杨明顺;李言;郑建明;袁启龙

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Yang, M. (Yangmingshun@xaut.edu.cn)

Source title: Sensors and Transducers

Abbreviated source title: Sensors Transducers

Volume: 16

Issue: SPEC. 1

Issue date: 2012

Publication year: 2012

Pages: 285-294

Language: English

E-ISSN: 17265479

Document type: Journal article (JA)

Publisher: International Frequency Sensor Association, 46 Thorny Vineway, Toronto, ON M2J 4J2, Canada

Abstract: Firstly, the principle of slab cold roll-beating is simply described. Then finite element model of slab cold roll-beating is established with ABAQUS and the simulation is completed. According to the simulation results, the changes of deforming force and the influence of technological parameters on the deforming force are analyzed. Finally, in combination with cold roll-beating experiments, the comparative analysis between the simulation and the experiment results is completed to test the validity of the finite element model. © 2012 IFSA.

Number of references: 11

Main heading: Experiments

Controlled terms: Deformation - Finite element method

Uncontrolled terms: Cold roll-beating - Deforming force - Experimental studies - Finite element simulations - Technological parameters

Classification code: 421 Strength of Building Materials; Mechanical Properties - 422

Strength of Building Materials; Test Equipment and Methods - 901.3 Engineering Research - 921.6 Numerical Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

18.

Accession number: 20130916060844

Title: Fatigue test of structural part of airfoil

Authors: Zhang, Yong-Fang1 ; Liu, Xu2 ; Feng, Xue3 ; Lu, Yan-Jun2/张永芳;刘旭;冯雪;吕延军

Author affiliation: 1 School of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

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3 School of Aerospace, Tsinghua University, Beijing 100084, China

Corresponding author: Zhang, Y.-F. (zyf_xaut@hotmail.com)

Source title: Jiaotong Yunshu Gongcheng Xuebao/Journal of Traffic and Transportation Engineering

Abbreviated source title: Jiaotong Yunshu Gongcheng Xuebao

Volume: 12

Issue: 6

Issue date: December 2012

Publication year: 2012

Pages: 55-62

Language: Chinese

ISSN: 16711637

Document type: Journal article (JA)

Publisher: Chang'an University, Southen Middle Section of Xi'an City Second Circular Road, Xi'an, 710064, China

Abstract: Under the alternating loads, the strain gauges were arranged on the test pieces' surfaces of airfoil web, the stresses and strains of test pieces were recorded, and the sizes and positions to fatigue damage in the test pieces were detected by X-rays. The positions and damage severities of test pieces were determined, and the crack growth lifes of airfoil structural parts were predicted. Test result shows that the fatigue lifes of test pieces are approximate one million cycles under 40 kN sinusoidal alternating compression load, and they are in good agreement with the expected distribution of fatigue life (ten thousand-one million cycles). The stresses and strains from fatigue test and theory calculation are similar in variation trends, and the errors are about 10%. The high load and the moment around x axis cause the rivet failure and sheet fracture of test pieces, and the predicted fatigue crack growth life is 10 183 cycles.

Number of references: 20

Main heading: Airfoils

Controlled terms: Crack detection - Cracks - Elasticity - Fatigue damage - Fatigue testing - Structural design

Uncontrolled terms: Alternating loads - Compression loads - Fatigue cracks - High load - Life predictions - Sheet fracture - Structural parts - Theory calculation

Classification code: 408.1 Structural Design, General - 421 Strength of Building Materials; Mechanical Properties - 422.2 Strength of Building Materials : Test Methods - 652.1 Aircraft, General

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

19.

Accession number: 20130916053445

Title: Experimental and numerical study on inlet and outlet conditions of a bulb turbine with considering free surface

Authors: Zhao, Y.P.1 ; Liao, W.L.1 ; Feng, H.D.1 ; Ruan, H.1 ; Luo, X.Q.1, 2/;廖伟丽;;罗兴铸

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, Xi'an, Shannxi Province, China

2 FINE Institute for Hydraulic Machinery, Huaxing Times Plaza, No.478 Wensan Rd, Hangzhou 310013, China

Corresponding author: Zhao, Y.P. (zhaoy0168@hotmail.com)

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

Issue: PART 6

Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 4:
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Issue date: 2012

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Article number: 062049

Language: English

ISSN: 17551307

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Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: For a bulb turbine, it has a low head and a big runner diameter, and the free surface influences the flow at the inlet and outlet of the turbine, which bring many problems such as vibration, cracks and cavitation to the turbine. Therefore, it is difficult to get the precise internal flow characteristics through a numerical simulation with conventional ideal flow conditions. In this paper, both numerical and experimental methods are adopted to investigate the flow characteristics at the inlet and outlet of the bulb turbine with considering free surface. Firstly, experimental and numerical studies in a low head pressure pipeline are conducted, and the corresponding boundary condition according with reality is obtained through the comparison between the model test result and the CFD simulation result. Then, through an analysis of the velocity and pressure fields at the inlet of the bulb turbine at different heads, the flow characteristics and rules at the entrance of the bulb turbine have been revealed with considering free surface; Finally, the performance predictions for a bulb turbine have been conducted by using the obtained flow rules at the inlet as the boundary condition of a turbine, and the causes that lead to non-uniform forces on blades, cavitation and vibration have been illustrated in this paper, which also provide a theory basis for an accurate numerical simulation and optimization design of a bulb turbine. © Published under licence by IOP Publishing Ltd.

Number of references: 5

Main heading: Inlet flow

Controlled terms: Boundary conditions - Bulb turbines - Cavitation - Computational fluid dynamics - Computer simulation - Hydraulic machinery - Numerical methods - Surfaces - Turbomachine blades

Uncontrolled terms: CFD simulations - Experimental and numerical studies - Flow characteristics - Flow rules - Free surfaces - Ideal flow - Internal flow characteristics - Low head - Model tests - Non-uniform - Numerical and

experimental methods - Performance prediction - Pressure field - Simulation and optimization

Classification code: 931 Classical Physics; Quantum Theory; Relativity - 921.6 Numerical Methods - 921 Mathematics - 951 Materials Science - 723.5 Computer Applications - 631.1.1 Liquid Dynamics - 631.1 Fluid Flow, General - 632.2 Hydraulic Equipment and Machinery

DOI: 10.1088/1755-1315/15/6/062049

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20.

Accession number: 20130916053408

Title: Numerical simulation of fluid-structure interaction for axial flow blade based on weak coupling

Authors: Zheng, X.B.1 ; Guo, P.C.1 ; Luo, X.Q.1/郑小波;郭鹏程;罗兴铤

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, No.5 South Jinhua Road, Xi'an 710048, China

Corresponding author: Zheng, X.B. (zhengxbb@163.com)

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

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Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 4: Advances in Computational and Experimental Techniques

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Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: Numerical simulation of three-dimensional flow in whole flow passage of axial flow hydraulic turbine was conducted based on the Reynolds-averaged N-S equations and the standard k-E model. Stress analysis of axial flow blade were carried on by elasticity unsteady FEM. The fluid domain and solid domain were calculated by sequential iteration. Based on weak coupling technology, the fluid-structure interaction analysis of the axial flow blade was conducted. Instantaneous flow field characteristic and stress distribution on blade were analyzed. According to the comparing with the results of pure flow numerical simulation, the pressure difference between press side and suction side increases after considering the FSI, to a certain extent, which

will worsen cavitations performance of the blade. Meanwhile, stress distribution on the blades do not change significantly, but the maximum stress value increases markedly, and the maximum displacement reduces slightly. The research demonstrates that the FSI not only changes the distribution of the flow field in blade area, but also have a greater impact on the stress of the blades. © Published under licence by IOP Publishing Ltd.

Number of references: 10

Main heading: Axial flow

Controlled terms: Computational fluid dynamics - Elasticity - Flow fields - Fluid structure interaction - Hydraulic machinery - Iterative methods - Navier Stokes equations - Stress analysis - Stress concentration - Three dimensional

Uncontrolled terms: Fluid domain - Fluid-structure interaction analysis - Instantaneous flow - Maximum displacement - Maximum stress - N-S equations - Pressure differences - Sequential iteration - Suction side - Three-dimensional flow - Weak couplings - Whole flow passage

Classification code: 951 Materials Science - 921.6 Numerical Methods - 902.1

Engineering Graphics - 632.2 Hydraulic Equipment and Machinery - 631.1 Fluid Flow, General - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1088/1755-1315/15/6/062012

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

21.

Accession number: 20130916053411

Title: Improved Suter-transformation for complete characteristic curves of pump-turbine

Authors: Zheng, X.B.1, 2 ; Guo, P.C.1, 2 ; Tong, H.Z.1 ; Luo, X.Q.1, 2/郑小波;郭鹏程;;罗兴铤

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, No.5 South Jinhua Road, Xi'an 710048, China

2 FINE Institute for Hydraulic Machinery, Huaxing Times Plaza, No.478 Wensan Rd, Hangzhou 310013, China

Corresponding author: Zheng, X.B.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

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Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 4: Advances in Computational and Experimental Techniques

Issue date: 2012

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Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: The complete characteristic curve of the pump turbine show "s" characteristic in the anti-pump and pump working-condition. The multi-numerical values of unit discharge and unit moment the curve caused by crossover and overlap phenomena of the curve may bring inconvenience for transition process analysis. In this paper, complete characteristic curves of the pump turbine were dealt with using improved Suter curve transformation method. A surface fitting were carried out for transformed WH curve. Therefore, a three-dimensioned surface was achieved. The transition process of load shedding was analyzed using the curve above-mentioned. The results show that the method used in the paper can eliminates the uneven distribution, crossover, overlapping and multi-value characteristic, thus providing convenience for the transition process analysis of pump-turbine. © Published under licence by IOP Publishing Ltd.

Number of references: 6

Main heading: Hydraulic turbines

Controlled terms: Hydraulic machinery - Pumped storage power plants

Uncontrolled terms: Characteristic curve - Load-shedding - Multi-value -

Pump-turbines - Surface fitting - Transformation methods - Transition process -

Unit discharge

Classification code: 402.1 Industrial and Agricultural Buildings - 617.1 Hydraulic Turbines - 632.2 Hydraulic Equipment and Machinery

DOI: 10.1088/1755-1315/15/6/062015

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

22.

Accession number: 20130916053493

Title: Study of capillary experiments and hydrologic factors under subsurface drip irrigation with fractal theory

Authors: Zhou, W.1, 2 ; Cao, L.2/;

Author affiliation: 1 Xi'an University of Technology, Xi'an 710054, China

2 North China University of Water Resources and Electric Power, Henan Zhengzhou 450011, China

Corresponding author: Zhou, W. (zhouwen@ncwu.edu.cn)

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

Volume: 15

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Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 5: Application in Industries and in Special Conditions

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Publication year: 2012

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Document type: Conference article (CA)

Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

Conference date: August 19, 2012 - August 23, 2012

Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: Soil spatial variability is one of the primary environmental factors that influences the hydraulic factors and technical indicators of subsurface drip irrigation (SDI), whose emitters are buried in the soil. This paper aimed at evaluating these effects of soil spatial variability on hydrologic factors under SDI. And some SDI emitter and capillary experiments were designed to obtain test data and distribution of pressure and emitter discharge. First, The results of labyrinth non-turbulent mosaic drip emitter test and fractal theory were used to research the fractal and quantitative relationship between single emitter hydrologic factors and soil physical parameters; and then, the capillary experiments and the relationship among hydrologic factors of capillary were used to analyze the fractal and quantitative relationship between hydrologic factors of capillary and soil physical parameters, which explained the inner relationship between spatial variability of soil and hydrologic factors of filed pipeline network under SDI, and provide theory support for the plan, design, management and production of SDI. © Published under licence by IOP Publishing Ltd.

Number of references: 10

Main heading: Subirrigation

Controlled terms: Experiments - Fractals - Hydraulic machinery - Soils

Uncontrolled terms: Drip emitter - Emitter discharges - Environmental factors - Fractal theory - Hydraulic factors - Pipeline networks - Production of - Single emitter - Soil physical parameters - Spatial variability - Subsurface drip irrigation - Technical indicator - Test data

Classification code: 483.1 Soils and Soil Mechanics - 632.2 Hydraulic Equipment and Machinery - 821.3 Agricultural Methods - 901.3 Engineering Research - 921 Mathematics

DOI: 10.1088/1755-1315/15/7/072031

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

23.

Accession number: 20130916053271

Title: The multi-objective optimization of the horizontal-axis marine current turbine based on NSGA-II algorithm

Authors: Zhu, G.J.1, 2 ; Guo, P.C.1, 2 ; Luo, X.Q.1, 2 ; Feng, J.J.1, 2/;郭鹏程;罗兴锜;

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, No.5 South Jinhua Road, Xi'an 710048, China

2 FINE Institute for Hydraulic Machinery, Huaxing Times Plaza, No.478 Wensan Rd, Hangzhou,

310013, China

Corresponding author: Zhu, G.J.

Source title: IOP Conference Series: Earth and Environmental Science

Abbreviated source title: IOP Conf. Ser. Earth Environ. Sci.

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Monograph title: 26th IAHR Symposium on Hydraulic Machinery and Systems - Session 2:
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Conference name: 26th IAHR Symposium on Hydraulic Machinery and Systems

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Conference location: Beijing, China

Conference code: 95632

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: The present paper describes a hydrodynamic optimization technique for horizontal-axial marine current turbine. The pitch angle distribution is important to marine current turbine. In this paper, the pitch angle distribution curve is parameterized as four control points by Bezier curve method. The coordinates of the four control points are chosen as optimization variables, and the sample space are structured according to the Box-Behnken experimental design method (BBD). Then the power capture coefficient and axial thrust coefficient in design tip-speed ratio is obtained for all the elements in the sample space by CFD numerical simulation. The power capture coefficient and axial thrust are chosen as objective function, and quadratic polynomial regression equations are constructed to fit the relationship between the optimization variables and each objective function according to response surface model. With the obtained quadratic polynomial regression equations as performance prediction model, the marine current turbine is optimized using the NSGA-II multi-objective genetic algorithm, which finally offers an improved marine current turbine. © Published under licence by IOP Publishing Ltd.

Number of references: 6

Main heading: Turbines

Controlled terms: Computational fluid dynamics - Hydraulic machinery - Multiobjective optimization

Uncontrolled terms: Axial thrust - Bezier curve - Box-Behnken experimental design - CFD numerical simulations - Control point - Hydrodynamic optimizations - Marine current turbines - Multi objective optimizations (MOO) - Multi-objective genetic algorithm - NSGA-II - NSGA-II algorithm - Objective functions - Optimization variables - Parameterized - Performance prediction models - Pitch angle distribution

- Power capture - Quadratic polynomial - Response surface models - Sample space
- Tip speed ratio

Classification code: 612.3 Gas Turbines and Engines - 632.2 Hydraulic Equipment and Machinery - 921.5 Optimization Techniques - 921.6 Numerical Methods

DOI: 10.1088/1755-1315/15/4/042039

Database: Compendex

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1.

Accession number: 20131016076016

Title: Network position, enterprise capabilities and knowledge power

Authors: Dang, Xing-Hua¹; Zhang, Wei¹; Hu, Wen-Xiu¹/党兴华;张伟;扈文秀

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology, 710054, China

Corresponding author: Dang, X.-H.

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2012 International Conference on Management Science and Engineering, ICMSE 2012 - 19th Annual Conference Proceedings

Issue date: 2012

Publication year: 2012

Pages: 1155-1160

Article number: 6414321

Language: English

ISSN: 21551847

ISBN-13: 9781467330145

Document type: Conference article (CA)

Conference name: 2012 19th Annual International Conference on Management Science and Engineering, ICMSE 2012

Conference date: September 20, 2012 - September 22, 2012

Conference location: Dallas, TX, United states

Conference code: 95652

Sponsor: National Natural Science Foundation of China; Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: The dependence of node on knowledge resource in technological innovation network is the basis of knowledge power, and also the prerequisite and guarantee for the the success of enterprise cooperation innovation. In this study, reference on social network theory and management theory, use optimal scaling regression to investigate the relation on enterprise network position, enterprise capabilities and knowledge power in technological innovation network. The result show that there is a Significant positive correlation between enterprise

network position and knowledge power, enterprise capabilities and knowledge power, enterprise network position and enterprise capabilities. And the enterprise capabilities has a significant mediating effect between enterprise network position and knowledge power. © 2012 IEEE.

Number of references: 27

Main heading: Industry

Controlled terms: Management science

Uncontrolled terms: Enterprise capabilities - Enterprise cooperations - Enterprise networks - knowledge power - Knowledge resource - Management theory - Mediating effect - Positive correlations - Social network theory - Technological innovation

Classification code: 911 Cost and Value Engineering; Industrial Economics - 912 Industrial Engineering and Management - 912.2 Management - 913 Production Planning and Control; Manufacturing

DOI: 10.1109/ICMSE.2012.6414321

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131016076039

Title: The impact of separation of ultimate control rights and cash flow rights on debt financing cost

Authors: Dang, Xing-Hua¹ ; Wang, Yu-Xiao^{1, 2} ; Yang, Min-Li/^{党兴华};;;

Author affiliation: 1 College of Economy and Management, Xi'an University of Technology, 710053, China

2 School of Economics and Management, Xi'an Technological University, 710032, China

Corresponding author: Dang, X.-H.

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2012 International Conference on Management Science and Engineering, ICMSE 2012 - 19th Annual Conference Proceedings

Issue date: 2012

Publication year: 2012

Pages: 1308-1313

Article number: 6414344

Language: English

ISSN: 21551847

ISBN-13: 9781467330145

Document type: Conference article (CA)

Conference name: 2012 19th Annual International Conference on Management Science and Engineering, ICMSE 2012

Conference date: September 20, 2012 - September 22, 2012

Conference location: Dallas, TX, United states

Conference code: 95652

Sponsor: National Natural Science Foundation of China; Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: To disclose the effects of separation of ultimate controlling rights and cash flow rights on debt financing cost, this paper examines empirically how ultimate controlling shareholder influences cost of debt, based on a balanced panel (4880 observations in total) composed of 976

non-financial companies listed in Shenzhen and Shanghai stock exchange during 2006 ~ 2010

and applied random effect model and parametric tests to empirically investigate the impact of separation of ultimate controlling rights and cash flow rights on debt financing cost by controlling related variables. The results show that the separation of ultimate controlling right and cash flow right does affect cost of debt. Specifically speaking, (1) the ultimate controlling shareholders' cash flow rights is negatively related to cost of debt, indicating that the higher cash flow rights of ultimate controlling shareholders, the lower the cost that it expropriates the debtor, the listed company will use little cost of debt; (2) the degree of separation of ultimate controlling shareholders' control rights and cash flow rights has significantly negative correlation with cost of debt, indicating that the supplier of debt capital will charge for higher capital cost for higher separation of control rights and cash flow rights in order to mitigate agency conflicts, compared with those companies without separation of control right and cash flow right. © 2012 IEEE.

Number of references: 20

Main heading: Costs

Controlled terms: Industry - Management science - Shareholders

Uncontrolled terms: Capital costs - Cash flow - Control rights - Controlling shareholders - Debt financing - Degree of separation - Listed companies - Negative correlation - Parametric test - Random-effect models - Related variables - Shanghai stock exchanges - ultimate controlling

Classification code: 911 Cost and Value Engineering; Industrial Economics - 912.2 Management

DOI: 10.1109/ICMSE.2012.6414344

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131016083574

Title: Effect investigation of relative humidity and temperature on multi-layer corrugated sandwich structures

Authors: Dongmei, Wang¹ ; Huxiang, Gong^{1, 2} ; Ziyu, Bai¹/王冬梅;;

Author affiliation: 1 Media and Communication School, Shenzhen Polytechnic, Shenzhen 518055, China

2 Printing and Packaging Engineering School, Xi'an University of Technology, Xi'an, China

Corresponding author: Dongmei, W. (sxxawdm@sina.com)

Source title: Journal of Sandwich Structures and Materials

Abbreviated source title: J. Sandw. Struct. Mater.

Volume: 15

Issue: 2

Issue date: March 2013

Publication year: 2013

Pages: 156-167

Language: English

ISSN: 10996362

E-ISSN: 15307972

Document type: Journal article (JA)

Publisher: SAGE Publications Ltd, 55 City Road, London, EC1Y 1SP, United Kingdom

Abstract: The mechanical properties of multi-layer corrugated sandwich structure are investigated in this paper. The mathematical model in which the structure factors and temperature and relative humidity are concerned is developed through the cooperation of theories and experiments. Then the model is normalized by the elastic modulus of the medium under controlled condition, thus this model can be used to predict the effect of various temperature and relative humidities on the plateau stress of multi-layer corrugated sandwich structure under flatwise compression. Comparisons of the predictions and experiments are made in order to examine the accuracy of the model, and a good correlation is obtained in view of the experimental error. The proposed model can be applied to the practical material selection and optimal design of corrugated sandwiches. Meanwhile, the proposed model might provide valuable information for the investigation of different materials with corrugated sandwich structure. © The Author(s) 2013 Reprints and permissions:

sagepub.co.uk/journalsPermissions.nav.

Number of references: 10

Main heading: Corrugated materials

Controlled terms: Atmospheric humidity - Experiments - Mathematical models - Mechanical properties - Sandwich structures

Uncontrolled terms: Controlled conditions - Corrugated sandwich structures - Different materials - Experimental errors - Good correlations - Optimal design - Plateau stress - Practical materials - Relative humidity and temperatures - Structure factors - Temperature and relative humidity

Classification code: 415 Metals, Plastics, Wood and Other Structural Materials - 443.1 Atmospheric Properties - 694.2 Packaging Materials - 901.3 Engineering Research - 921 Mathematics - 951 Materials Science

DOI: 10.1177/1099636212463834

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131016077354

Title: Survey on fault-tolerant navigation

Authors: Fan, Shunxi1 ; Li, Ye1 ; Hu, Shaolin2/;李晔;胡绍林

Author affiliation: 1 School of Automation, Xi'an University of Technology, Xi'an City, Shannxi, China

2 State Key Laboratory of Astronautics, P.O.Box505-15, Xi'an City, Shannxi, China

Corresponding author: Fan, S. (fanshunxi511531@126.com)

Source title: Proceedings - 2012 3rd Global Congress on Intelligent Systems, GCIS 2012

Abbreviated source title: Proc. - Global Congr. Intelligent Syst., GCIS

Monograph title: Proceedings - 2012 3rd Global Congress on Intelligent Systems, GCIS 2012

Issue date: 2012

Publication year: 2012

Pages: 241-244

Article number: 6449526

Language: English

ISBN-13: 9780769548609

Document type: Conference article (CA)

Conference name: 2012 3rd Global Congress on Intelligent Systems, GCIS 2012

Conference date: November 6, 2012 - November 8, 2012

Conference location: Wuhan, China

Conference code: 95815

Sponsor: Wuhan University of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Positioning accuracy, availability and reliability of GPS are dependent on the numbers of visible satellites and geometry structure of satellite constellations. But in poor conditions, it is difficult to satisfy the needs of the precision positioning. In order to improve the validity of the GPS receiver in signal masking occasions, a lot of researchers have proposed a variety of methods. In this paper, the author will analyze the current research status and method of faulttolerant navigation. Finally, research foreground of faulttolerant navigation is expected briefly. © 2012 IEEE.

Number of references: 20

Main heading: Global positioning system

Controlled terms: Intelligent systems - Navigation - Research - Signal receivers

Uncontrolled terms: Current research status - Fault-tolerant - Geometry structure - GPS receivers - Positioning accuracy - Precision positioning - Satellite constellations

Classification code: 716 Telecommunication; Radar, Radio and Television - 716.3 Radio Systems and Equipment - 717 Optical Communication - 718 Telephone Systems and Related Technologies; Line Communications - 723.4 Artificial Intelligence - 901.3 Engineering Research

DOI: 10.1109/GCIS.2012.45

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131016090143

Title: Service selection algorithm based on dynamic assessment for web of things

Authors: He, Xiu-Qing^{1, 2}; Wang, Ying-Hui¹/何秀青;王映辉

Author affiliation: 1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 School of Computer Science, Shaanxi Normal University, Xi'an, Shaanxi 710062, China

Corresponding author: He, X.-Q. (xiuqing@snnu.edu.cn)

Source title: Tien Tzu Hsueh Pao/Acta Electronica Sinica

Abbreviated source title: Tien Tzu Hsueh Pao

Volume: 41

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 117-122

Language: Chinese

ISSN: 03722112

CODEN: TTHPAG

Document type: Journal article (JA)

Publisher: Chinese Institute of Electronics, P.O. Box 165, Beijing, 100036, China

Abstract: Due to WoT (Web of Things) is composed of numbers of resources-limited devices, it is a challenging work that the optimal web service is selected from a similar functionality service group based on the non-functional properties (QoS) without heavy interactive query process in SOA (Service Oriented Architecture). This work focus on the dynamic update process of QoS attributes vector and the optimal service selection algorithm based on the client's feedback in WoT. The service time is estimated by the REM (Random Exponential Marking) which use the concurrent clients number as the price index, and the exponentially weighted average of the current service expense and the previous record. The service availability is estimated by the online probability with the service state detection. The Empirical results based on NS-3.13 simulation show that the accuracy of optimal web service selection based on our presented approaches is significantly better than the simple QoS attributes.

Number of references: 20

Main heading: Algorithms

Controlled terms: Information services - Optimization - Quality of service - Service oriented architecture (SOA) - Web services - Websites

Uncontrolled terms: Dynamic update - Ideal solutions - Interactive queries - Non functional properties - ON dynamics - Price index - QoS attributes - Random exponential markings - Service availability - Service groups - Service selection - Service time - Soa (serviceoriented architecture) - State Detection - Web of things - Web service selection - Weighted averages

Classification code: 921 Mathematics - 903.4 Information Services - 723 Computer Software, Data Handling and Applications - 921.5 Optimization Techniques - 722.4 Digital Computers and Systems - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 718 Telephone Systems and Related Technologies; Line Communications

DOI: 10.3969/j.issn.0372-2112.2013.01.021

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131016089859

Title: Method of allocating ecological compensation amount of river basin based on improved Shapley value

Authors: Li, Wei-Qian¹ ; Xie, Jian-Cang¹ ; Li, Jian-Xun^{1, 2} ; Shen, Hai^{1, 3}/李维乾;解建仓;李建勋;申海

Author affiliation: 1 Water Resources Research Institute, Xi'an University of Technology, Xi'an 710048, China

2 College of Economics and Management, Xi'an University of Technology, Xi'an 710048, China

3 Department of General Studies, Xi'an International Studies University, Xi'an 710128, China

Corresponding author: Li, W.-Q. (wqli@foxmail.com)

Source title: Xitong Gongcheng Lilun yu Shijian/System Engineering Theory and Practice

Abbreviated source title: Xitong Gongcheng Lilun yu Shijian

Volume: 33

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 255-261

Language: Chinese

ISSN: 10006788

CODEN: XGLSE2

Document type: Journal article (JA)

Publisher: Systems Engineering Society of China, Xitong Yanjiusuo, Beijing, 100080, China

Abstract: In order to make the ecological compensation for river basin more reasonable and stimulate the water ecological protection initiatives of the upstream region, the water ecological compensation amount allocation method is proposed based on the model of DEA cooperative game with the supposition of cooperation among different areas along the basin. Considering the limitation of classic Shapley value in cooperative game, this value is improved by the weight among different areas confirmed by trapezoidal fuzzy number. Applied to Xin'an River basin, its result indicates that the allocation method adopted in this paper not only made the driving force for ecological protection stronger, but also combined the importance of different index such as the water and its benefits in the basin, meanwhile, the water benefits was considered among different areas. Thus, it is more reasonable, and it could provide reference for the ecological compensation amount allocation research of the other basins cross regions.

Number of references: 18

Main heading: Game theory

Controlled terms: Data envelopment analysis - Ecology - Fuzzy rules - Watersheds

Uncontrolled terms: Cooperative game - Ecological compensation - River basins -

Shapley value - Trapezoidal fuzzy numbers

Classification code: 444.1 Surface Water - 454.3 Ecology and Ecosystems - 731.1 Control Systems - 922 Statistical Methods - 922.1 Probability Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20130916071101

Title: Design and implementation of AGC testing diagnostic analytic system

Authors: Liang, Li¹ ; Ning, Peifeng¹ ; Li, Qiang¹ ; Wu, Zihao²/梁莉;;李强;

Author affiliation: 1 Xi'an University of Technology, Xi'an, China

2 ShaanXi Electric Power Research Institute, Xi'an, China

Corresponding author: Liang, L. (liangli@xaut.edu.cn)

Source title: Proceedings - 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Abbreviated source title: Proc. - Int. Conf. Control Eng. Commun. Technol., ICCECT

Monograph title: Proceedings - 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Issue date: 2012

Publication year: 2012

Pages: 593-596

Article number: 6414036

Language: English

ISBN-13: 9780769548814

Document type: Conference article (CA)

Conference name: 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Conference date: December 7, 2012 - December 9, 2012

Conference location: Shenyang, Liaoning, China

Conference code: 95648

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Automatic Generation Control (AGC) testing diagnostic analytic system of power grid is used for AGC test between grid dispatching center and the power generator set. It is also for collecting, processing, analyzing and evaluating the generator set's testing data. Eventually a set of assessment results can be achieved. This system is mainly used for testing, diagnosing and evaluating the functions of the power station's generator set, Distributed Control System (DCS) control system and remote control system (RTU). This system can not only support the message diagnosis of IEC60870-5-101, IEC60870-5-104, DNP3.0 and so on, but also be used for collecting and displaying the main parameters such as main steam pressure, temperature, etc. It also appraises the performance index of testing data of generator set. © 2012 IEEE.

Number of references: 7

Main heading: Distributed parameter networks

Controlled terms: Communication - Control systems - Data acquisition

Uncontrolled terms: Automatic generation control - Design and implementations -

Dispatching center - Main parameters - Main steam pressures - Performance evaluation - Performance indices - Power grids - Power station - Testing data

Classification code: 703.1 Electric Networks - 716 Telecommunication; Radar, Radio and Television - 723.2 Data Processing and Image Processing - 731.1 Control Systems

DOI: 10.1109/ICCECT.2012.184

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20131016077576

Title: Fault location for distribution systems with distributed generations

Authors: Liu, Jian¹ ; Zhang, Xiaoqing¹ ; Tong, Xiangqian² ; Zhang, Zhihua¹ ; Du, Hongwei³ ;
Chen, Yikai¹/刘健;张小庆;同向前;张志华;杜红卫;陈宜凯

Author affiliation: 1 Shaanxi Electric Power Research Institute, Xi'an 710054, China

2 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an
710048, China

3 NARI Group Corporation, Nanjing 210003, China

Corresponding author: Liu, J. (powersys@263.net)

Source title: Dianli Xitong Zidonghua/Automation of Electric Power Systems

Abbreviated source title: Dianli Xitong Zidonghua

Volume: 37

Issue: 2

Issue date: January 25, 2013

Publication year: 2013

Pages: 36-42+48

Language: Chinese

ISSN: 10001026

CODEN: DXZIE9

Document type: Journal article (JA)

Publisher: Automation of Electric Power Systems Press, P.O. Box 323, Nanjing, 210003, China

Abstract: In order to solve the problem of fault location for distribution systems with distributed generation (DG), the fault current behavior of various DGs and the short-circuit current of the distribution systems with DGs are analyzed. The feasibility of the traditional fault location approach based on the information of overcurrent for distribution systems with DGs is investigated. An improved fault location process is proposed for overhead line based feeders, in which the reclosing procedure and the escape of DGs in case of fault situation are coordinated. Conclusions are drawn on DG connected to the bus and DG connected to the feeders based on cables with an appropriate limit to the total capacity, the fault can be identified with the traditional overcurrent based criteria. As for the case of DG connected to the overhead line based feeder of a rather long distance, it is necessary to utilize the improved fault location process proposed. © State Grid Electric Power Research Institute Press.

Number of references: 12

Main heading: Distributed power generation

Controlled terms: Electric fault location - Electric power distribution - Feeding -
Overhead lines

Uncontrolled terms: Current behaviors - Distributed generators - Distribution
automation - Distribution systems - Over current - Reclosing

Classification code: 691.2 Materials Handling Methods - 706.1.2 Electric Power Distribution
- 706.2 Electric Power Lines and Equipment

DOI: 10.7500/AEPS201208181

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131016090553

Title: Fast motion estimation based on the special and temporal characteristic

Authors: Liu, Long^{1, 2} ; Song, Qi-Jun³ ; Zhao, Tai-Fei¹ ; Yuan, Xiang-Hui²/刘龙;宋琦军;赵太飞;元向辉

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Electronic and Information Engineering, Xi'an Jiao Tong University, Xi'an 710049, China

3 China Electronic Systems Engineering Corporation, Beijing 100091, China

Corresponding author: Liu, L.

Source title: Tongxin Xuebao/Journal on Communications

Abbreviated source title: Tongxin Xuebao

Volume: 34

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 121-127

Language: Chinese

ISSN: 1000436X

Document type: Journal article (JA)

Publisher: Editorial Board of Journal on Communications, No.1 Binhe Road, Hepingli, Dongcheng District, Beijing, 1000013, China

Abstract: The spacial and temporal character of motion vector were analysed and according to the spacial and temporal characteristic of motion vector, the different proposed search schemes were adopted for motion estimation; The experimental results shows the proposed algorithm reduce the prediction error and has a significant computational speedup compared with other algorithms, but offers a similar, even better performance.

Number of references: 15

Main heading: Motion estimation

Controlled terms: Algorithms - Image coding - Image compression

Uncontrolled terms: Better performance - Block Matching - Fast motion estimation - Motion Vectors - Prediction errors - Search scheme - Temporal characteristics

Classification code: 716.1 Information Theory and Signal Processing - 723 Computer Software, Data Handling and Applications - 741 Light, Optics and Optical Devices - 921 Mathematics

DOI: 10.3969/j.issn.1000-436x.2013.01.014

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20131016087689

Title: Biaxial fatigue behavior under combined axial and torsional loading for S135 drill pipe steel

Authors: Luo, She-Ji^{1, 2} ; Zhao, Kang¹ ; Wang, Rong²/雒设计;赵康;王荣

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Materials Science and Engineering, Xi'an Shiyou University, Xi'an 710065, China

Corresponding author: Luo, S.-J. (sjluo@xsyu.edu.cn)

Source title: Cailiao Gongcheng/Journal of Materials Engineering

Abbreviated source title: Cailiao Gongcheng

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 40-44

Language: Chinese

ISSN: 10014381

CODEN: CAGOEW

Document type: Journal article (JA)

Publisher: Beijing Institute of Aeronautical Materials (BIAM), P.O. Box 81, Beijing, 100095, China

Abstract: Biaxial fatigue behavior under combined axial and torsional loading for S135 drill pipe steel was investigated by means of fatigue tests and data regression analysis methods, and the fracture surfaces were observed through scanning electron microscopy. The results show that when τ_a/σ_{eq} is 0.7 the fatigue life regulation of S135 drill pipe steel under combined axial and torsional loading can be represented well by the fatigue life equation, which is expressed by equivalent stress of tension-torsion stress amplitude. The fracture surfaces are mainly divided into three regions such as the crack initiation, steady crack propagation and instantaneous fracture. Fatigue cracks mainly initiate at the specimen surface and propagate rapidly in specimen. Fatigue cracks are multiple source and the so-called ridge patterns were formed by connecting the different fatigue source and combined loading. The fracture surfaces are characteristic of river patterns at crack initiation region, the fracture surfaces are characteristic of fatigue striation and rippled patterns at crack propagation region.

Number of references: 13

Main heading: Drill pipe

Controlled terms: Crack initiation - Cracks - Fatigue crack propagation - Fatigue of materials - Fatigue testing - Fracture - Loading - Regression analysis - Scanning electron microscopy - Steel pipe - Structural loads - Tensile strength

Uncontrolled terms: Axial-torsional loading - Biaxial fatigue - Combined loading - Data regression - Equivalent stress - Fatigue cracks - Fatigue striations - Fracture surfaces - In-phase - Multiple source - Ridge patterns - River pattern - Specimen surfaces - Stress amplitudes - Torsional loadings

Classification code: 741.1 Light/Optics - 672 Naval Vessels - 545.3 Steel - 922.2 Mathematical Statistics - 511.2 Oil Field Equipment - 421 Strength of Building Materials; Mechanical Properties - 408.1 Structural Design, General - 422.2 Strength of Building Materials : Test Methods

DOI: 10.3969/j.issn.1001-4381.2013.01.009

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20131016077821

Title: Experiment on salt exchange between sediments and ponding water in drainage ditches of saline farmland

Authors: Pan, Yanxin¹ ; Luo, Wan¹ ; Jia, Zhonghua¹ ; Li, Jin¹ ; Chen, Yuan¹/潘延鑫;罗纨;贾忠华;李进;陈远

Author affiliation: 1 Northwest Key Laboratory of Water Resource and Environment Ecology, Ministry of Education, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Luo, W. (wluo@mail.xaut.edu.cn)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 2

Issue date: January 15, 2013

Publication year: 2013

Pages: 81-87

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: In arid and semi-arid agricultural regions, artificial drainage is provided to maintain salt balance of the saline farmland. As a result of poor drainage outlet in some sites, salt accumulation in the drainage ditches often leads to salinity rising to a critical level that threatens ecological functions of the ditch system. Periodic flushing with fresh water has been suggested to slow down the process of salinity growth in such ditch system. But the effect of the slow moving freshwater in drainage ditches on salt balance is unclear. In order to investigate the internal mechanism of salt release in saline drainage ditches when freshwater is added, and to examine the relationship of salt exchange between sediment and the overlying water under hydrostatic condition, we conducted a laboratory study to measure spatial and temporal variations of salinity in sediment and water interface with two experimental plexiglass columns. Each column is 15 cm in (inner) diameter and 100 cm high. The column has a top cover to prevent the evaporation loss of water. Sediments were filled to 30 cm thick at the bottom and covered by a freshwater layer of 65 cm. Room temperature was kept at $(15\pm1)^{\circ}\text{C}$ during the experiment. The sediment salinity was measured by extracting the pore water through four sampling holes on each column wall. Electrical conductivity of the sediment pore water and the overlying water were measured every 24 hours during the monitoring period. The sediments were taken from a saline agricultural drainage ditches in Lubotan reclamation area in Shaanxi, China, where salinity elevation in the drainage ditches presents a problem to the ecological functions of the ditch system, and freshwater is available for salt flushing in the end of the irrigation season. We measured salinity variations in water and sediments in the experimental columns continuously for a period of 648 hours, then calculated salt fluxes in the water and sediment interface based on measured sediment properties. The monitoring data showed that there existed a linear salinity variation zone (or the diffusion boundary layer) within 10 cm of the sediment and water interface, salinity of water remained stable above 10 cm. The results also showed that salt diffusion within the boundary layer slowed the salt release from the sediment, and the slowing effect increased with

the thickness of the boundary layer. Flux calculation results showed that salt fluxes released from the sediment can be predicted with a power function, i.e., salt fluxes decreased rapidly initially and then stabilized with time. Observed salinity change in sediment indicates that salt release through molecular diffusion only in drainage ditches is a slow process, which may have only limited impact on salt balance in drainage ditches when the flushing water moves slowly. And hydrodynamic dispersion is required to speed up release of salt from the ditch sediment in order to remove accumulated salts in the drainage ditches in saline environment.

Number of references: 26

Main heading: Sediments

Controlled terms: Boundary layers - Drainage - Ecology - Electric conductivity - Experiments - Farms - Hydrodynamics - Saline water - Salinity measurement - Salts - Sedimentology - Water quality

Uncontrolled terms: 24 hours - Agricultural drainage - Column walls - Critical level - Diffusion boundary-layers - Diffusive boundary layers - Ditch sediments - Drainage ditches - Drainage outlet - Ecological functions - Electrical conductivity - Evaporation loss - Flux calculations - Fresh Water - Hydrodynamic dispersions - Hydrostatic conditions - Laboratory studies - Molecular diffusion - Monitoring periods - Overlying water - Pore waters - Power functions - Reclamation areas - Room temperature - Saline environment - Saline farmland - Salinity change - Salinity variations - Salt accumulations - Salt balances - Salt diffusion - Salt flux - Sediment interface - Sediment pore water - Sediment properties - Semi arid - Spatial and temporal variation - Speed up - Water interface

Classification code: 502 Mines and Quarry Equipment and Operations - 631.2

Hydrodynamics - 651.1 Aerodynamics, General - 701.1 Electricity: Basic Concepts and Phenomena - 804.1 Organic Compounds - 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 901.3 Engineering Research - 483 Soil Mechanics and Foundations - 401 Bridges and Tunnels - 406 Highway Engineering - 442 Flood Control; Land Reclamation - 444 Water Resources - 453.2 Water Pollution Control - 454.3 Ecology and Ecosystems - 481.1 Geology

DOI: 10.3969/j.issn.1002-6819.2013.02.012

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20131016090376

Title: Dynamic variation of soil moisture and temperature under infiltration of low-temperature water

Authors: Ren, Jie^{1, 2}; Shen, Zhenzhong^{2, 3}; Zhao, Jian³; Yang, Jie¹/任杰;沈振中;赵坚;杨杰

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Source title: Shuikexue Jinzhan/Advances in Water Science

Abbreviated source title: Shuikexue Jinzhan

Volume: 24

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 125-131

Language: Chinese

ISSN: 10016791

CODEN: SHUJE6

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: An experimental study was conducted in an indoor soil tank, to examine low-temperature infiltration and movement through unsaturated soil in topsoil layer of riparian zone. Low-temperature water infiltration tests were carried out at three different heads in the filling fine sand. Infiltration process, moisture and temperature fields were continuously monitored and analyzed to study the impacts of the water head, the infiltration parameters, and moisture and temperature fields. Results showed that the higher the infiltration head, the greater is the vertical (horizontal) migration distance of the wetting front. The migration velocity of the vertical wetting front also gradually decreased with increasing infiltration time, and becoming more and more stability at the end. Infiltration rater had the larger fluctuations at the head of 5 cm and the settling time is greater than the head of 25 cm and 45 cm. The higher the infiltration head, the faster is the decreasing rate of average temperature before the temperature fields could go into a relatively steady status. At the head of 25 cm, infiltration of the low temperature water basically reached steady status after 420 min and the head of 45 cm is after 240 min.

Number of references: 13

Main heading: Infiltration

Controlled terms: Soil moisture - Temperature - Wetting

Uncontrolled terms: Dynamic variations - Experimental studies - Fine sand -

Infiltration parameters - Infiltration process - Infiltration time - Low temperatures -

Migration distance - Migration velocity - Riparian zones - Settling time - Soil

infiltration - Soil temperature - Steady status - Top-soil layer - Unsaturated soil -

Water heads - Water infiltration - Wetting fronts

Classification code: 483.1 Soils and Soil Mechanics - 641.1 Thermodynamics - 931.2

Physical Properties of Gases, Liquids and Solids

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20130916071043

Title: A new network security model based on machine learning

Authors: Wang, Hai-Sheng^{1, 2}; Gui, Xiao-Lin¹ /王海生;

Author affiliation: 1 School of Electronic and Information Engineering, Xi'an Jiaotong University, Xi'an 710049, China

2 School of Computer Science and Technology, Xi'an University of Technology, Xi'an 710048,

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Corresponding author: Wang, H.-S. (haisheng.wang@yahoo.cn)

Source title: Proceedings - 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Abbreviated source title: Proc. - Int. Conf. Control Eng. Commun. Technol., ICCECT

Monograph title: Proceedings - 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Issue date: 2012

Publication year: 2012

Pages: 860-865

Article number: 6413977

Language: English

ISBN-13: 9780769548814

Document type: Conference article (CA)

Conference name: 2012 International Conference on Control Engineering and Communication Technology, ICCECT 2012

Conference date: December 7, 2012 - December 9, 2012

Conference location: Shenyang, Liaoning, China

Conference code: 95648

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Rough set classifier or SVM (Support Vector Machine) classifier is a typical machine learning model. The Rough set classifier and SVM classifier are used to classify nodes as trust nodes, strange nodes and malicious nodes. We use the Rough set classifier to replace the method by settings of the threshold. The innovation of the article is to improve the computation accuracy and the efficiency of the classification computation by using Rough set combined with SVM classifier. In the cases where according to the value of an attribute or the values of two attributes the corresponding classification result can be determined, we use the Rough set classifier. In other cases, we use SVM classifier. Compared with existing security models, experiment results indicate that the model can obtain the higher examination rate of malicious nodes and the higher transaction success rate. © 2012 IEEE.

Number of references: 16

Main heading: Rough set theory

Controlled terms: Communication - Computational efficiency - Computer simulation - Experiments - Network security - Support vector machines

Uncontrolled terms: Classification results - Computation accuracy - Machine learning models - Malicious nodes - Rough set - Rough set classifiers - Security model - SVM classifiers - SVM(support vector machine)

Classification code: 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 901.3 Engineering Research - 921 Mathematics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI: 10.1109/ICCECT.2012.28

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20131016090057

Title: Effect of austempering processing parameters on microstructure and hardness of nodular cast iron dense bar

Authors: Wang, Jin-Cheng¹ ; Li, Wei-Ming² ; Zhang, Zhong-Ming^{1, 2} ; Xu, Chun-Jie²/王锦程;李伟明;张忠明;徐春杰

Author affiliation: 1 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Wang, J.-C. (jchwang@nwpu.edu.cn)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 70-75

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: In order to find the optimum austempering process parameters for QT500-7 nodular cast iron dense bar produced by horizontal continuous casting(HCC), the orthogonal experiment was used to optimize the parameters, i. e austenitizing temperature, austenitizing time, austempering temperature and austempering time, according to the microstructure and hardness of the dense bar. The results show that the major factors influencing hardness of the austempered nodular cast iron dense bar are austempering temperature and austenitizing temperature. As the temperatures increases, the fraction of retained austenite increases and the hardness decreases. The highest hardness of the austempered QT500-7 dense bar is obtained by using following process parameters: austenitizing temperature and austempering temperature are 840°C and 280°C, and austenitizing time and austempering time are 60 min and 100 min, respectively. The microstructure of the dense bar under the optimum austempering process is composed of thin acicular ferrite and retained austenite, and the hardness is 476 HBW.

Number of references: 13

Main heading: Nodular iron

Controlled terms: Continuous casting - Hardness - Microstructure

Uncontrolled terms: Acicular ferrite - Austempering - Austempering process -

Austempering temperature - Austenitizing - Austenitizing temperature - HCC -

Horizontal continuous casting - Major factors - Orthogonal experiment - Orthogonal test - Process parameters - Processing parameters - Retained austenite

Classification code: 421 Strength of Building Materials; Mechanical Properties - 534.2

Foundry Practice - 933 Solid State Physics - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20131016076122

Title: An empirical research on the long-term equilibrium and short-term dynamic between educational input and economic output in Henan Province

Authors: Wang, Li-Hui¹ ; Guo, Li-Hong¹ ; Liu, Zhi-Hong²;/郭立宏;

Author affiliation: 1 School of Economic and Management, Xi'an University of Technology, 710054, China

2 School of Economic, Shenyang University, 110044, China

Corresponding author: Wang, L.-H.

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2012 International Conference on Management Science and Engineering, ICMSE 2012 - 19th Annual Conference Proceedings

Issue date: 2012

Publication year: 2012

Pages: 1874-1882

Article number: 6414427

Language: English

ISSN: 21551847

ISBN-13: 9781467330145

Document type: Conference article (CA)

Conference name: 2012 19th Annual International Conference on Management Science and Engineering, ICMSE 2012

Conference date: September 20, 2012 - September 22, 2012

Conference location: Dallas, TX, United states

Conference code: 95652

Sponsor: National Natural Science Foundation of China; Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Using the sample data from 1952 to 2011 years to study the dynamic correlation between educational input and economic output by the multivariate auto regression model, and on this basis, it conducts a systematic analysis of the interaction mechanisms between factors of education input and economic output by using co-integration theory and error correction model. Conclusion indicates that: there is not only a long-term stable equilibrium relationship between educational investment and economic output, but also has a short-term dynamic relationship. In the long term, the output elasticity which educational investment and educational infrastructure construction on economic output is the most significant, respectively 1.112 and 1.313; in the short term, the response coefficient which economic output on educational investment and college students is positive, respectively 0.492 and 0.208. © 2012 IEEE.

Number of references: 22

Main heading: Investments

Controlled terms: Data integration - Education computing - Elasticity - Error correction - Management science - Regression analysis - Students

Uncontrolled terms: Cointegration - Economic output - educational input - Error correction models - Multivariate regression models

Classification code: 912.4 Personnel - 912.2 Management - 911.2 Industrial Economics - 922.2 Mathematical Statistics - 723.2 Data Processing and Image Processing - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory

DOI: 10.1109/ICMSE.2012.6414427

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20131016077806

Title: Effects comparison of seeds germinating treated by extremely low frequency PEF and HVEF

Authors: Xi, Gang¹ ; Liu, Kai¹ ; Xu, Yongkui² ; Gao, Yu¹/习岗;刘锴;徐永奎;高宇

Author affiliation: 1 Department of Applied Physics, Institute of Science, Xian University of Technology, Xi'an, 710048, China

2 Department of Physics, Fudan University, Shanghai, 200433, China

Corresponding author: Xi, G. (xig@xaut.edu.cn)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 1

Issue date: January 1, 2013

Publication year: 2013

Pages: 265-271

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: The effect of electric field on crop seeds is one of the popular issues in electric field biological effects. Previous studies were focused in high voltage electrostatic field (HVEF), few researches on pulsed electric field (PEF). In this study the germinating mung beans were treated in extremely low frequency PEF with 1 Hz and HVEF, and their growth indicators such as fresh quality, shoot length and root length, and associated physiological variables such as spontaneous luminescence, soluble protein content, the activity of superoxide dismutase (SOD) and peroxidase (POD) were investigated. The results showed that fresh quality, shoot length and root length of germinating mung beans treated in PEF with 1 Hz were significantly promoted, while

the effect of HVEF with the same strength was not obvious. The mechanism study indicated that the PEF and HVEF had some influences on oxidative and protein metabolism of germinating mung beans, and decomposition of storage protein in the initial stage of germination and synthesis of new protein in later stage of germination were promoted by the PEF, while HVEF promoted the synthesis of protein in later stage of germination. The study also found that the PEF and HVEF can activate SOD induced by superoxide anion free radical and promote the synthesis of POD. The cause of the difference about effect of extremely low frequency PEF and HVEF on germinating crop seeds was also discussed in this paper. It is concluded that same intensity extremely low frequency pulsed electric field (PEF) with 1 Hz and HVEF can promote crop seed germination and growth of the crop, however, the PEF with 1 Hz is more effective than HVEF.

Number of references: 22

Main heading: Seed

Controlled terms: Crops - Cultivation - Electric fields - Experiments - Free radicals
- Oxygen - Proteins

Uncontrolled terms: Biological effects - Difference of germination - Extremely low frequencies - High voltage electrostatic field - Initial stages - Mechanism studies - Mungbeans - Oxidative metabolism - Peroxidase (POD) - Protein metabolism - Pulsed electric field - Root length - Seed germination - Shoot length - Soluble proteins - Storage proteins - Superoxide anions - Superoxide dismutases

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 804 Chemical Products Generally - 804.1 Organic Compounds - 821.3 Agricultural Methods - 821.4 Agricultural Products - 901.3 Engineering Research

DOI: 10.3969/j.issn.1002-6819.2013.01.035

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

17.

Accession number: 20131016077611

Title: Biological effects of pulsed electric field based on potential fluctuations in maize seedlings

Authors: Xi, Gang¹; Liu, Kai¹; Yang, Yunjing²; Gao, Yu¹/习岗;刘锴;杨运经;高宇

Author affiliation: 1 School of Science, Xi'an University of Technology, Xi'an 710048, China

2 School of Science, Northwest Agriculture and Forestry University, Yangling 712100, China

Corresponding author: Xi, G. (xig@xaut.edu.cn)

Source title: Gaodianya Jishu/High Voltage Engineering

Abbreviated source title: Gaodianya Jishu

Volume: 39

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 129-134

Language: Chinese

ISSN: 10036520

CODEN: GAJIE5

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: In order to obtain remarkable electric field biological effect on crop seeds, the basic characteristics of natural potential fluctuations in maize seedlings were studied by analyzing the wavelet de-noising and power spectrum. The results showed that the power spectrum of natural potential fluctuations in maize seedlings was mainly distributed in 0~1 Hz with a gravity frequency of 0.2 Hz. Based on the potential fluctuation characteristics, extremely low frequency pulsed electric field of 100 kV/m and 0.2 Hz was used to treat germinating maize seeds. It was found that the seed germination process was significantly promoted: on the 5th day of germination, the fresh mass, shoot length and root length of germinating maize seed respectively increased by 17.55%, 60.13% and 28.50% compared with those of the control group. Analysis results of ultraweak luminescence(UL) changes in the germinating seeds showed that the ultraweak luminescence was promoted by the pulsed electric field: the spontaneous luminescence and the integrated intensity of delayed luminescence of the germinating maize seed respectively increased by 68.84% and 33.93% compared with those of the control group on the 5th day of germination. The promotion implied that the 0.2 Hz extremely low frequency pulsed electric field accelerated the DNA synthesis reaction and cell metabolism of the germinating seeds. It is concluded that the coupled resonance between pulsed electric field and plant natural potential may be the cause of the extremely low frequency pulsed electric field's biological effects.

Number of references: 21

Main heading: Seed

Controlled terms: Cultivation - Electric fields - Luminescence - Power spectrum - Synthesis (chemical)

Uncontrolled terms: Biological effects - Coupled resonance - Maize - Plant potentials - Pulsed electric field - Ultraweak luminescence

Classification code: 921 Mathematics - 821.4 Agricultural Products - 821.3 Agricultural Methods - 941 Acoustical and Optical Measuring Instruments - 802.2 Chemical Reactions - 711 Electromagnetic Waves - 701.1 Electricity: Basic Concepts and Phenomena - 741.1 Light/Optics

DOI: 10.3969/j.issn.1003-6520.2013.01.019

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

18.

Accession number: 20131016090448

Title: Growth process of tantalum capacitor oxide film for 0603 size

Authors: Xu, Yunfei¹; Li, Chunguang^{1, 2}; An, Tao¹; Wu, Hua²/徐云飞;李春光;安涛;吴华

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

2 Ningxia Xingri Electronics Co. Ltd., Yinchuan 750011, China

Corresponding author: Xu, Y. (yddxuyunfei@163.com)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 190-193

Language: Chinese

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: The growth process of tantalum capacitor oxide film for 0603 size was investigated. The main process parameters of dielectric film Ta₂O₅ quality including formation fluid type, formation liquid concentration, current density and constant voltage time were employed to carry out experiments. At last DC leakage current of wet measure was collected, and through comparative experiments the best process parameters of the oxidation film growth were obtained. In conclusion, the best process parameters are 0.2% (volume ratio) nitric acid solution, 40 mA/g current density and 5 h constant voltage time. Through the best process parameters, the oxidation film quality can be improved greatly. Finally, leakage current is very small and comes to 0.036 μ A. Copyright © 2013, Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 15

Main heading: Tantalum

Controlled terms: Capacitors - Current density - Dielectric films - Experiments - Film growth - Nitric acid - Oxide films - Tantalum oxides

Uncontrolled terms: Comparative experiments - Constant voltage - DC leakage current - Formation fluids - Growth process - Liquid concentration - Main process - Nitric acid solutions - Oxidation film - Process parameters - Tantalum capacitors - Volume ratio

Classification code: 901.3 Engineering Research - 804.2 Inorganic Compounds - 804 Chemical Products Generally - 712.1.2 Compound Semiconducting Materials - 712.1 Semiconducting Materials - 708.1 Dielectric Materials - 704.1 Electric Components - 701.1 Electricity: Basic Concepts and Phenomena - 543.4 Tantalum and Alloys

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

19.

Accession number: 20131016076110

Title: A study on measuring urbanization process drag from urban-rural digital divide in China

Authors: Xue, Wei-Xian¹ ; Liu, Jun¹/薛伟贤;刘军

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology, 710054, China

Corresponding author: Xue, W.-X.

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2012 International Conference on Management Science and Engineering, ICMSE 2012 - 19th Annual Conference Proceedings

Issue date: 2012

Publication year: 2012

Pages: 1794-1799

Article number: 6414415

Language: English

ISSN: 21551847

ISBN-13: 9781467330145

Document type: Conference article (CA)

Conference name: 2012 19th Annual International Conference on Management Science and Engineering, ICMSE 2012

Conference date: September 20, 2012 - September 22, 2012

Conference location: Dallas, TX, United states

Conference code: 95652

Sponsor: National Natural Science Foundation of China; Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Informatization is a great motivity to urbanization, but urbanization process is seriously cumbered by urban-rural digital divide in China. Romer's theory of economy growth drag is used for reference, and non-linear regression is applied to build a model of measuring the urbanization process drag from China's urban-rural digital divide. As a research result, the formula of measuring drag is deduced. The China's urbanization process drag is determined not only by urban-rural digital divide but also by industry structure, population diathesis and life quality. It implies that the urbanization process drag from China's urban-rural digital divide is not an oversimplified problem of information technology permeation, but a complicated socioeconomic problem. This study can help government to make some systemic measures to use informatization to drive urbanization process. © 2012 IEEE.

Number of references: 21

Main heading: Economic and social effects

Controlled terms: Drag - Economics - Information technology - Management science

Uncontrolled terms: Digital divide - Economy growth - Industry structures -

Informatization - Life qualities - Non-linear regression - Research results -

Socio-economic problems - Urban-rural - urbanization process

Classification code: 651.1 Aerodynamics, General - 903 Information Science - 912.2

Management - 971 Social Sciences

DOI: 10.1109/ICMSE.2012.6414415

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20.

Accession number: 20131016076097

Title: Industry regulation's effect on the enterprise performance: From the evidence of CPL

Authors: Yang, Yi1 ; Lin, Yan-Duo1 ; Wang, De-Long2/杨屹;;

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology, 710048, China

2 CNPC Logging Co., 710021, China

Corresponding author: Yang, Y.

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2012 International Conference on Management Science and Engineering, ICMSE 2012 - 19th Annual Conference Proceedings

Issue date: 2012

Publication year: 2012

Pages: 1705-1712

Article number: 6414402

Language: English

ISSN: 21551847

ISBN-13: 9781467330145

Document type: Conference article (CA)

Conference name: 2012 19th Annual International Conference on Management Science and Engineering, ICMSE 2012

Conference date: September 20, 2012 - September 22, 2012

Conference location: Dallas, TX, United states

Conference code: 95652

Sponsor: National Natural Science Foundation of China; Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: In the context of petroleum industry regulation policy and constantly change of enterprise external environment, transmission mechanism of industry regulation's effect on petroleum enterprise is taken as an entry point. Based on the financial indicators which are commonly used in enterprise performance evaluation, evaluation index system of petroleum enterprise is constructed combined with nonfinancial indicators which transmission mechanism reflects, and the key index factors are filtered by using the principal component analysis method. The enterprise performance under industry regulation is evaluated by using the related data of CPL enterprise in the period from 2002 to 2007. Research shows that financial performance presents volatility in the short term, yet in the long term, enterprise core ability will be promoted. The result indicates that industry regulation affects the level of enterprise performance by the direct transmitting of enterprise behavior and indirectly transmitting of market structure. © 2012 IEEE.

Number of references: 23

Main heading: Industry

Controlled terms: Management science - Petroleum industry - Principal component analysis

Uncontrolled terms: Enterprise performance - evaluation - Industry regulations - Petroleum enterprise - transfer analysis

Classification code: 913 Production Planning and Control; Manufacturing - 912.2 Management - 912 Industrial Engineering and Management - 922.2 Mathematical Statistics - 911 Cost and Value Engineering; Industrial Economics - 512 Petroleum and Related Deposits - 511 Oil Field Equipment and Production Operations - 513 Petroleum Refining

DOI: 10.1109/ICMSE.2012.6414402

Database: Compendex

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21.

Accession number: 20131016090365

Title: An assessment of the effectiveness of vegetated filter strips for Heihe River headwaters area using numerical simulation

Authors: Yang, Yinqun^{1, 2}; Li, Huaen²; Yang, Fangshe³/杨寅群;李怀恩;杨方社

Author affiliation: 1 School of Resource and Environmental Science, Wuhan University, Wuhan 430079, China

2 Northwest Key Laboratory of Water Resources and Environment Ecology, Ministry of Education, Xi'an University of Technology, Xi'an 710048, China

3 College of Urban and Environmental Science, Northwest University, Xi'an 710069, China

Corresponding author: Li, H. (huaienl@yahoo.com)

Source title: Shuikexue Jinzhan/Advances in Water Science

Abbreviated source title: Shuikexue Jinzhan

Volume: 24

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 42-48

Language: Chinese

ISSN: 10016791

CODEN: SHUJE6

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: In order to investigate the feasibility of using numerical simulation to assessing the effectiveness of vegetative filter strips (VFS), the vegetative filter strip hydrology and sediment transport model (VFSSMOD) is applied to the Heihe River headwaters area. The effect of VFS' width and slop on the removal rate of sediments is estimated by VFSSMOD, and the appropriate design is subsequently determined for a VFS system. The VFS effectiveness for the load reduction of nonpoint source pollution in a watershed is assessed with the linear relationship between the sum of total phosphorus (TP) and total nitrogen (TN), and sediments. The results show that a grass filter strip with width in the range of 3-5 m is advisable and the slop gradient should be less than 60. The reduction of sediments, TP and TN would be 21.7%, 12.4% and 14.3%, respectively, after the installation of VFSs on all sensitive riparian zones of the Heihe River headwaters area. The study demonstrates that VFS can play an important role in the water quality control for the Heihe River headwaters area.

Number of references: 23

Main heading: Water pollution

Controlled terms: Computer simulation - Numerical models - Sediment transport - Sedimentology - Water quality

Uncontrolled terms: Appropriate designs - Grass filter strip - Heihe river - Linear relationships - Load reduction - Non-point source pollution - Removal rate -

Riparian zones - Sediment transport model - Total nitrogen - Total phosphorus -
Vegetated filter strips - Vegetative filter strips

Classification code: 453 Water Pollution - 453.2 Water Pollution Control - 481.1 Geology
- 631.3 Flow of Fluid-Like Materials - 723.5 Computer Applications - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

22.

Accession number: 20131016086605

Title: Dynamic modeling and analysis of an elastic mechanism with a nonlinear damping model

Authors: Yuan, Da-Ning1/原大宁

Author affiliation: 1 Mechanical and Precision Instrument Engineering Department, Xi'an
University of Technology, Xi'an, China

Corresponding author: Yuan, D.-N. (daningyuan@163.com)

Source title: JVC/Journal of Vibration and Control

Abbreviated source title: JVC/J Vib Control

Volume: 19

Issue: 4

Issue date: March 2013

Publication year: 2013

Pages: 508-516

Language: English

ISSN: 10775463

E-ISSN: 17412986

CODEN: JVCOFX

Document type: Journal article (JA)

Publisher: SAGE Publications Inc., 2455 Teller Road, Thousand Oaks, CA 91320, United States

Abstract: Dynamic modeling and simulation of a mechanical system with nonlinear strain-frequency-dependent damping are carried out in this paper. First, methods of nonlinear strain-frequency-dependent damping are described, which extracts nonlinear damping information of a damping alloy specimen from the free decay signal by means of the moving autoregressive model method. Second, the viscoelastic theory is introduced to describe the strain-frequency-dependent characteristics of damping more accurately, a viscoelastic three parameter structural damping constitution model is developed whose parameters are identified from the test data by means of an optimization algorithm. The finite element dynamic equations for strain-frequency-dependent damping are derived through the established three parameters constitution. Thirdly, the established element dynamic equations are assembled into the system dynamic equations of an elastic linkage mechanism by means of the kineto-elastodynamic theory, and a closed-form numerical algorithm is constructed in order to solve the high-order differential equations with time-varying coefficients. Lastly, a dynamic simulation example of a four-bar elastic linkage mechanism with damping alloy components is given. It is shown that the elastic vibration can be significantly reduced with the components replaced by damping alloy parts. © 2012 The Author(s).

Number of references: 19

Main heading: Damping

Controlled terms: Algorithms - Alloys - Computer simulation - Differential equations
- Dynamic analysis - Dynamics - Elasticity - Finite element method
Uncontrolled terms: Auto regressive models - Closed form - Damping alloy -
Dynamic equations - Dynamic modeling and simulation - Elastic linkage mechanism -
Elastic mechanism - Elastic vibration - Finite Element - Four bar - Free decay -
High-order - Kineto-elastodynamic - Mechanical systems - Modeling and analysis -
Nonlinear damping - Numerical algorithms - Optimization algorithms - Structural
damping - System Dynamics - Test data - Three parameters - Time-varying
coefficient - Viscoelastic damping - Viscoelastic theory
Classification code: 422.2 Strength of Building Materials : Test Methods - 531.1 Metallurgy
- 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications
- 921 Mathematics - 931.1 Mechanics

DOI: 10.1177/1077546309356463

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

23.

Accession number: 20131016077879

Title: Finite element numerical simulation and control parameter of czochralski silicon
monocrystal during shoulder growth process

Authors: Zhang, Jing¹ ; Liu, Ding¹ ; Zhao, Yue¹ ; Jiao, Shang-Bin¹/张璟;刘丁;赵悦;焦尚彬

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of
Technology, Xi'an 710048, China

Corresponding author: Zhang, J. (weeine@gmail.com)

Source title: Rengong Jingti Xuebao/Journal of Synthetic Crystals

Abbreviated source title: Rengong Jingti Xuebao

Volume: 42

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 58-64

Language: Chinese

ISSN: 1000985X

CODEN: RJXUEN

Document type: Journal article (JA)

Publisher: Chinese Ceramic Society, Baiwanzhuang, Beijing, 100831, China

Abstract: Both formation of a dislocation free crystal nucleus and ability to entrance to body
growth during crowning growth are cruxes of Cz-Si monocrystal growth. It often shows
dislocation happened after an unknown flow on melt surface cutting in crystal in the process of
crowning growth in practice. In the paper, crystal rotation process is proposed at the beginning of
crowning growth. Melt convection and temperature distribution are calculated by finite element
numerical simulation. Flow rate variation near the solid-liquid interface melt surface and
explanation the formation of the flow are given. Simulation and experiment results show the
effectiveness for the proposed method.

Number of references: 15

Main heading: Computer simulation

Controlled terms: Crystal cutting - Crystal orientation - Dislocations (crystals) - Plastic deformation - Silicon

Uncontrolled terms: Control parameters - Crystal rotations - Czochralski silicon -

Dislocation free crystals - Finite element numerical simulation - Growth process - Melt convection - Melt surfaces - Monocrystal - Monocrystal growth - Rate variation - Solid-liquid interfaces

Classification code: 421 Strength of Building Materials; Mechanical Properties - 482.2.1

Gems - 712.1.1 Single Element Semiconducting Materials - 723.5 Computer Applications - 933.1.1 Crystal Lattice

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

24.

Accession number: 20131016077512

Title: Analysis of leakage characteristics of finger seal based on system responses

Authors: Zhang, Yan-Chao¹ ; Liu, Kai¹ ; Zhou, Lian-Jie² ; Hu, Hai-Tao²/张延超;刘凯;周连杰;胡海涛

Author affiliation: 1 School of Mechanical Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

2 The Research Laboratory of Mechanical System, China Gas Turbine Establishment, Aviation Industry Corporation of China, Chengdu 610500, China

Corresponding author: Zhang, Y.-C.

Source title: Hangkong Dongli Xuebao/Journal of Aerospace Power

Abbreviated source title: Hangkong Dongli Xuebao

Volume: 28

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 205-210

Language: Chinese

ISSN: 10008055

CODEN: HDOXE5

Document type: Journal article (JA)

Publisher: BUAA Press, Xue-Yuan Road No.37, Beijing, 100083, China

Abstract: The current work obtained the seal rotor displacement excitation through studying the association rules of rotor speed, rotor unbalanced force and rotor runout based on dynamic working characteristics of finger seal. Then, a dynamic computational model of finger seal system was constructed. The leakage clearance computation method was researched according to the dynamic displacement response characteristics from the constructed model. Then the dynamic leakage calculation method was constructed and the leakage analysis work was conducted. The results preliminarily shows that dynamic displacement response changes with the rotor excitation time in every rotation period. The dynamic leakage clearance produced by dynamic displacement response also changes with the rotor excitation time. The results also indicate that leakage numerical size is affected by working conditions, installation conditions and the abrasion

degree of finger boots. The method was validated by the computational example of a special engine and the comparison of calculating results and test data in references. The research work can provide valuable reference for dynamic performances design and study of finger seal.

Number of references: 15

Main heading: Seals

Controlled terms: Computational methods - Hysteresis

Uncontrolled terms: Computation methods - Computational model - Displacement response - Dynamic displacements - Dynamic performance - Finger seal - Leakage analysis - ON dynamics - Rotation period - Rotor displacement - Rotor excitations - Rotor speed - Run outs - System response - Test data in - Unbalanced force

Classification code: 619.1.1 Pipe Accessories - 921 Mathematics - 961 Systems Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

25.

Accession number: 20131016090202

Title: Application of the POSS/polymer organic-inorganic hybrids

Authors: Zhang, Zengping¹ ; Liang, Guozheng² ; Pei, Jianzhong¹ ; Fang, Changqing³/张增平;梁国正;裴建忠;方长青

Author affiliation: 1 Key Laboratory for Special Area Highway Engineering of Ministry of Education, School of Highway, Chang'an University, Xi'an 710064, China

2 Department of Polymer Engineering, Institute of Materials Engineering, Soochow University, Suzhou 215021, China

3 Institute of Printing and Packing Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, Z. (zhangzp99@yahoo.com.cn)

Source title: Gaofenzi Cailiao Kexue Yu Gongcheng/Polymeric Materials Science and Engineering

Abbreviated source title: Gaofenzi Cailiao Kexue Yu Gongcheng

Volume: 29

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 187-190

Language: Chinese

ISSN: 10007555

CODEN: GCKGEI

Document type: Journal article (JA)

Publisher: Chengdu University of Science and Technology, 24 South Section 1, Yihuan Rd., Chengdu, 610065, China

Abstract: Recently, POSS/polymer organic-inorganic hybrid materials have become the hot topic in the area of materials science, such as high-temperature resistant and insulating materials, low dielectric constant materials, sensors, optical components materials and catalysts carriers. The recent development of the application of these materials in the fields such as aero-astro, thermal resistance and flame retardancy, high-performance dielectric materials, porous functional

materials, catalysts, ceramics precursors, nanocomposites and pharmaceutical materials was reviewed. Finally, it is pointed out that the synthesis of POSS compounds is key factor to restrict the deeply research and wide application of POSS/polymer hybrids.

Number of references: 27

Main heading: Dielectric materials

Controlled terms: Applications - Catalysts - Functional materials - Hybrid materials
- Oligomers

Uncontrolled terms: Flame retardancy - High-temperature resistant - Hot topics -

Key factors - Low dielectric constant materials - Optical components -

Organic-inorganic hybrid - Organic-inorganic hybrid materials - Pharmaceutical materials
- Polyhedral oligomeric silsesquioxanes

Classification code: 933 Solid State Physics - 804 Chemical Products Generally - 803

Chemical Agents and Basic Industrial Chemicals - 951 Materials Science - 712 Electronic

and Thermionic Materials - 451.2 Air Pollution Control - 415 Metals, Plastics, Wood and

Other Structural Materials - 708.1 Dielectric Materials

Database: Compendex

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2013-03-23 新增 2 条

1.

Accession number: 20131116115660

Title: Integral type multi-ramp for single-slope ADC

Authors: Lyu, Nan¹ ; Yu, Ning Mei¹ ; Zhang, He Jiu¹/;余宁梅;

Author affiliation: 1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Lyn, N. (sheng_xing@yeah.net)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 303-306

Monograph title: Sensors, Measurement and Intelligent Materials

Issue date: 2013

Publication year: 2013

Pages: 1908-1912

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037856529

Document type: Conference article (CA)

Conference name: 2012 International Conference on Sensors, Measurement and Intelligent Materials, ICSMIM 2012

Conference date: December 26, 2012 - December 27, 2012

Conference location: Guilin, China

Conference code: 95893

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: This paper presents a integral type Multi-ramp architecture apply to MRSS ADC (Multiple-ramp single-slope ADC). On the one hand to improve the capacitance mismatch by change voltage reference, On the other hand to reduced the power consumption greatly. Implemented in the GSMC 180nm 2P4M CMOS process, in the power supply voltage of 1.8 V, 11-bit resolution, 10 MHZ sampling frequency, the result of max power consumption is 1.33mW of single unit. The DNL < 0.1LSB and max INL < 0.49LSB. The Multi-ramp achieved requirements for high speed and high accuracy MRSS ADC. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Sensors

Controlled terms: CMOS integrated circuits - Intelligent materials

Uncontrolled terms: CMOS image sensor - CMOS processs - High Speed - Intrinsic accuracy - MRSS ADC - Power supply voltage - Sampling frequencies - Single-slope ADC - Voltage reference

Classification code: 415 Metals, Plastics, Wood and Other Structural Materials - 714.2

Semiconductor Devices and Integrated Circuits - 801 Chemistry

DOI: 10.4028/www.scientific.net/AMM.303-306.1908

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131116105356

Title: Human action recognition with topic-relative conditional random field model

Authors: Zhang, Erhu1 ; Zhao, Yongwei1/张二虎;赵永伟

Author affiliation: 1 Department of Information Science, Xi'An University of Technology, Xi'an, China

Corresponding author: Zhang, E. (eh-zhang@xaut.edu.cn)

Source title: 2012 IEEE 5th International Conference on Advanced Computational Intelligence, ICACI 2012

Abbreviated source title: IEEE Int. Conf. Adv. Comput. Intell., ICACI

Monograph title: 2012 IEEE 5th International Conference on Advanced Computational Intelligence, ICACI 2012

Issue date: 2012

Publication year: 2012

Pages: 615-619

Article number: 6463239

Language: English

ISBN-13: 9781467317436

Document type: Conference article (CA)

Conference name: 2012 IEEE 5th International Conference on Advanced Computational Intelligence, ICACI 2012

Conference date: October 18, 2012 - October 20, 2012

Conference location: Nanjing, China

Conference code: 95872

Sponsor: IEEE Nanjing Section

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Human action recognition is a challenging field in computer vision. In this paper, a novel probabilistic graphical model, called topic-relative conditional random field(TCRF), is firstly proposed. The model is constructed by adding a topic node and using a triangular-chain structure in the top layer of the linear-chain conditional random field(LCRF) to overcome the drawback of independent and identical distribution in LCRF. Then, we define a dynamic region for each action and the discriminative features are extracted by using a hierarchical energy method. Lastly, two popular probabilistic graphical models, HMM and LCRF, and the proposed TCRF model are evaluated on our database, the experimental results show the effectiveness of the proposed method. © 2012 IEEE.

Number of references: 23

Main heading: Random processes

Controlled terms: Artificial intelligence - Gesture recognition - Speech recognition

Uncontrolled terms: Conditional random field - Discriminative features - Dynamic region - Energy method - Human-action recognition - Probabilistic graphical models - Top layers

Classification code: 716 Telecommunication; Radar, Radio and Television - 723.4 Artificial Intelligence - 723.5 Computer Applications - 922.1 Probability Theory

DOI: 10.1109/ICACI.2012.6463239

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130329 新增 11 条

1.

Accession number: 20131216133819

Title: An anti-counterfeiting method for printed image by digital halftoning method

Authors: Duan, Jinghong¹; Zhang, Erhu²/段敬红;张二虎

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 Department of Information Science, Xi'an University of Technology, Xi'an, China

Corresponding author: Duan, J.

Source title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Abbreviated source title: Int. Congr. Image Signal Process., CISP

Monograph title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Issue date: 2012

Publication year: 2012

Pages: 562-566

Article number: 6469758

Language: English

ISBN-13: 9781467309622

Document type: Conference article (CA)

Conference name: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Conference date: October 16, 2012 - October 18, 2012

Conference location: Chongqing, China

Conference code: 96020

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Anti-counterfeiting technology has been widely used in many fields, especially in printing industry for banknotes and security documents. This paper introduces an anti-counterfeiting method with varied screening angle and gives the realization procedure of this method. Firstly, the continuous-tone cover image is halftoned by ordered dithering halftoning method with 0° and 45° screening angle, respectively. Then, a binary figurative image which represents the hidden information is generated by using Photoshop software for serving as a mask image. Finally, the latent image is generated by combining the two halftoning images with different screening angle according to the figurative image. The diagonal edge detector is designed for extracting the hidden information. The experimental result shows that the proposed method can better generate the desired latent image and the hiding message can easily be exposed by the simply image processing method. © 2012 IEEE.

Number of references: 8

Main heading: Image processing

Controlled terms: Electrical engineering - Signal processing

Uncontrolled terms: Anti-counterfeiting - Digital halftoning - Digital halftoning methods - Halftoning methods - Hidden information - Image processing - methods - line screen - Security documents

Classification code: 709 Electrical Engineering, General - 716.1 Information Theory and Signal Processing - 741 Light, Optics and Optical Devices

DOI: 10.1109/CISP.2012.6469758

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131216133982

Title: A novel watermarking scheme using directionlet

Authors: He, Wenjuan¹; Liu, Jing¹; Duan, Jinghong¹; Wang, Jingyi²/何文娟;刘晶;段敬红;;

Author affiliation: 1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 Engineering Training Center, Xi'an University of Technology, Xi'an, China

Corresponding author: He, W.

Source title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Abbreviated source title: Int. Congr. Image Signal Process., CISP

Monograph title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Issue date: 2012

Publication year: 2012

Pages: 557-561

Article number: 6469921

Language: English

ISBN-13: 9781467309622

Document type: Conference article (CA)

Conference name: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Conference date: October 16, 2012 - October 18, 2012

Conference location: Chongqing, China

Conference code: 96020

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: In this paper, a new robust digital image watermarking algorithm is proposed in Directionlet transform domain. Directionlet transform (DT) is able to capture the directional edges and contours superior to many multi-resolution geometric analysis (MGA) tools. At first, sample the original image with the generator matrix; Then, decompose each coset into the subbands with directionlet transform. For embedding watermark bits, We select a $M \times M$ coefficients from the middle frequency domain of all the cosets of the lattice, as many as bits of the binary watermark image. The experimental results show that the proposed algorithm has a good resistance against to common attacks, moreover it outperforms previous methods in the most situations. © 2012 IEEE.

Number of references: 11

Main heading: Image watermarking

Controlled terms: Mathematical transformations - Signal processing - Watermarking

Uncontrolled terms: Binary watermarks - Digital image watermarking algorithms - Directionlet transform - Embedding watermarks - Frequency domains - Generator matrix - Geometric analysis - Multi-resolutions

Classification code: 716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing - 811.1.1 Papermaking Processes - 921.3 Mathematical Transformations

DOI: 10.1109/CISP.2012.6469921

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131116123469

Title: The application of SWMM model based on GIS in the piedmont rain control: A case study in Beiwucun gravel pit of Beijing, China

Authors: Li, Wu-Qing^{1, 2}; Kong, Gang^{1, 3}; Huang, Qiang¹; Chen, Jian-Gang²;; 黄强;

Author affiliation: 1 Xi'an University of Technology, Xi'an, China

2 Beijing Municipal Commission of Development and Reform, Beijing, China

3 Beijing Hydraulic Research Institute, Beijing, China

Corresponding author: Li, W.-Q.

Source title: Hydraulic Engineering - Proceedings of the 2012 SREE Conference on Hydraulic Engineering, CHE 2012 and 2nd SREE Workshop on Environment and Safety Engineering, WESE 2012

Abbreviated source title: Hydraul. Eng. - Proc. SREE Conf. Hydraul. Eng., CHE SREE Workshop Environ. Saf. Eng., WESE

Monograph title: Hydraulic Engineering - Proceedings of the 2012 SREE Conference on Hydraulic Engineering, CHE 2012 and 2nd SREE Workshop on Environment and Safety Engineering, WESE 2012

Issue date: 2013
 Publication year: 2013
 Pages: 43-48
 Language: English
 ISBN-13: 9781138000438
 Document type: Conference article (CA)
 Conference name: 2012 SREE Conference on Hydraulic Engineering, CHE 2012 and 2nd SREE Workshop on Environment and Safety Engineering, WESE 2012
 Conference date: December 21, 2012 - December 22, 2012
 Conference location: Hong Kong, Hong kong
 Conference code: 95984
 Sponsor: Society for Resources, Environment and Engineering (SREE)
 Publisher: CRC Press/Balkema, P.O. Box 447, 2300 AK Leiden,, Netherlands
 Abstract: SWMM model based on GIS was used to simulate piedmont rain-runoff in Beiwucun gravel pit, Beijing. The result showed that, with the increase in rainfall return period, the peak time significantly advances and the peak flow increases significantly. The Gravel pit in Beiwucun not only evidently mitigates piedmont flood, but also improves the urban river drainage standard and increase the amount of groundwater resources, due to the storage, detention, infiltration of the gravel pit. © 2013 Taylor & Francis Group.
 Number of references: 4
 Main heading: Gravel
 Controlled terms: Groundwater - Hydraulic structures - Hydraulics - Landforms - Rain - Safety engineering - Shore protection
 Uncontrolled terms: Beijing , China - Gravel pit - Peak flows - Rainfall return periods - SWMM models - Urban river
 Classification code: 632.1 Hydraulics - 611 Hydroelectric and Tidal Power Plants - 481.1 Geology - 914 Safety Engineering - 444.2 Groundwater - 441 Dams and Reservoirs; Hydro Development - 407.1 Maritime Structures - 443.3 Precipitation
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 4.
 Accession number: 20131216135861
 Title: Particle swarm optimization for multiple multicast routing problem
 Authors: Ma, Xuan1 ; Liu, Qing1/马炫;刘庆
 Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China
 Corresponding author: Ma, X. (maxuan@xaut.edu.cn)
 Source title: Jisuanji Yanjiu yu Fazhan/Computer Research and Development
 Abbreviated source title: Jisuanji Yanjiu yu Fazhan
 Volume: 50
 Issue: 2
 Issue date: February 2013
 Publication year: 2013
 Pages: 260-268

Language: Chinese

ISSN: 10001239

CODEN: JYYFEY

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: The optimization problem of multiple multicast routing with both bandwidth and delay constraints is more complicated than the multicast routing problem. To get the optimal solution of the multiple multicast routing problem quickly, this paper proposes a particle swarm optimization algorithm based on evolution of tree structure. In the proposed algorithm a particle, as a feasible solution of the problem, is represented as a vector, and the components of the particle are represented by tree structure coding. The flight of particles in the search space is implemented through the evolution of trees. Visual radius of a particle is introduced in the orbicular social structure of particle population to enhance the ability of particle neighborhood learning. The tree structure mutation method is designed to increase the possibility of which the algorithm jumps out of local optima. To the infeasible solutions unsatisfied with constraints in the population, penalty strategy is adopted to penalize the particle and its components according to the situation unsatisfied with constraints. Simulation experiments have been carried out on different network topologies produced by random for networks consisting of 26, 50 and 100 nodes. The results of solving the routings of multiple multicast requests show that the proposed algorithm performs better in searching optimal solution and converging speed.

Number of references: 20

Main heading: Network routing

Controlled terms: Algorithms - Computer simulation - Electric network topology - Forestry - Particle swarm optimization (PSO) - Routing algorithms - Trees (mathematics)

Uncontrolled terms: Infeasible solutions - Multicast routing - Optimization problems - Particle population - Penalty strategy - Searching optimal solution - Tree structures - Visual radius

Classification code: 703.1 Electric Networks - 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 821.0 Woodlands and Forestry - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131116120934

Title: The reverse mode of the photo activated charge domain in high field biased semi-insulating GaAs

Authors: Qu, Guanghui^{1, 2}; Shi, Wei¹/屈光辉;施卫

Author affiliation: 1 Department of Physics, Xi'an University of Technology, Xi'an 710058, China

2 No. 58 Yanxiang Road, Xi'an Shaanxi Province, China

Corresponding author: Qu, G. (Qgh@xaut.edu.cn)

Source title: Applied Physics Letters

Abbreviated source title: Appl Phys Lett

Volume: 102

Issue: 8

Issue date: February 25, 2013

Publication year: 2013

Article number: 082106

Language: English

ISSN: 00036951

CODEN: APPLAB

Document type: Journal article (JA)

Publisher: American Institute of Physics, 2 Huntington Quadrangle, Suite N101, Melville, NY 11747-4502, United States

Abstract: The nonlinear accumulation of the photogenerated electrons in high field biased Si-GaAs has been defined as photo activated charge domain (PACD). The transient transport dynamics of the PACD is investigated. The result shows that the PACD, working as a reverse gun dipole domain when biased electric field much higher than 4 kV/cm, and the reverse mode of the PACD could dominate the electric field shielding by its main electric field ultrafast and exponential rising against the bias field. Such mechanisms could play an important role in GaAs THz antenna, GaAs photoconductive semiconductor switch, and the other ultrafast GaAs devices.

© 2013 American Institute of Physics.

Number of references: 12

Main heading: Gallium arsenide

Controlled terms: Electric fields - Photoconductive switches - Semiconducting gallium

Uncontrolled terms: Electric field shielding - Photo-activated - Photoconductive semiconductor switches - Photogenerated electrons - Reverse mode - Semi-insulating GaAs - THz antenna - Transient transport

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 712.1.1 Single Element Semiconducting Materials - 714.2 Semiconductor Devices and Integrated Circuits - 804 Chemical Products Generally

DOI: 10.1063/1.4794073

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131216128828

Title: Prediction and prevention of water and soil erosion in qilinsi hydro-electric power station project construction

Authors: Ren, Jianmin^{1, 2}; Ran, Xinmin³; Jiang, Cunren²;;;

Author affiliation: 1 School of Water Resource and Hydroelectric Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 School of Civil Engineering, Lanzhou Jiaotong University, Lanzhou, 730070, China

3 School of Resources and Environment, Lanzhou University, Lanzhou, 730000, China

Corresponding author: Ren, J. (rjmin4148@sina.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 295-298

Monograph title: Progress in Environmental Protection and Processing of Resource
 Issue date: 2013
 Publication year: 2013
 Pages: 2107-2111
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037856499
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Sustainable Energy and Environmental Engineering, ICSEEE 2012
 Conference date: December 29, 2012 - December 30, 2012
 Conference location: Guangzhou, China
 Conference code: 95889
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: Qilinsi hydro-electric power station is constructed for power generation. This paper analyses the influences of seven aspects to water and soil erosion in project constructing, such as construction occupation land, dig and backfill of main body, project discard- dregs, materials field exploitation, construction traffic roads, immigrants installing and geologic disaster. The water and soil erosion quantity was predicted. Prevention measures for water and soil erosion were presented correspondingly and it has important significance for constructing the project successfully and improving circumjacent environment. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 6
 Main heading: Soils
 Controlled terms: Electricity - Erosion - Power plants
 Uncontrolled terms: Construction traffic - Geologic disasters - Main bodies - Paper analysis - Power station - Prevention measures - Project construction - Soil erosion
 Classification code: 407 Maritime and Port Structures; Rivers and Other Waterways - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 701.1 Electricity: Basic Concepts and Phenomena - 706 Electric Transmission and Distribution
 DOI: 10.4028/www.scientific.net/AMM.295-298.2107
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 7.
 Accession number: 20131216128829
 Title: Study on the rainfall similar of soil erosion on loess slope
 Authors: Shen, Zhenzhou^{1, 2} ; Yao, Wenyi² ; Li, Zhanbin¹/申震洲;姚文艺;李占斌
 Author affiliation: 1 Xi'an University of Technology, Xian 710049, China
 2 Yellow River Institute of Hydraulic Research, Zhengzhou 450003, China
 Corresponding author: Shen, Z. (zzsh80@163.com)
 Source title: Applied Mechanics and Materials
 Abbreviated source title: Appl. Mech. Mater.
 Volume: 295-298

Monograph title: Progress in Environmental Protection and Processing of Resource
 Issue date: 2013
 Publication year: 2013
 Pages: 2112-2115
 Language: English
 ISSN: 16609336
 E-ISSN: 16627482
 ISBN-13: 9783037856499
 Document type: Conference article (CA)
 Conference name: 2012 International Conference on Sustainable Energy and Environmental Engineering, ICSEEE 2012
 Conference date: December 29, 2012 - December 30, 2012
 Conference location: Guangzhou, China
 Conference code: 95889
 Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany
 Abstract: A lot of research about soil erosion similarity have done and obtained rich achievements. However, strictly speaking, it need to do a lot of deep study about to establish the ratio scale model of soil erosion, the problems unsolved include of does not establish the similar equation system about soil erosion and sediment yield entities simulation. we did some experiment, the date shows: the raindrop speed mainly at 0.6-5m/s in 10min, the wave crest was 1m/s and 4.2m/s. At the same times, the 0.125mm grain diameter raindrop speed was about at 0.6-1.4m/s, the 0.25mm grain diameter raindrop speed was about at 1-1.4m/s, the 0.375mm grain diameter raindrop speed was about at 1-1.4m/s, the 0.5mm grain diameter raindrop speed was about at 1-3.4m/s, the 0.75mm grain diameter raindrop speed was about at 3.4m/s, the 1mm grain diameter raindrop speed was about at 4.2m/s, the 1.25mm grain diameter raindrop speed was about at 4.2-5m/s, the 1.5mm grain diameter raindrop speed was about at 5m/s. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 14
 Main heading: Drops
 Controlled terms: Computer simulation - Erosion - Geologic models - Rain - Sediments - Soils - Speed
 Uncontrolled terms: Equation systems - Grain diameter - Loess slopes - Ratio scale - Sediment yields - Soil erosion - Wave crest
 Classification code: 443.3 Precipitation - 481.1 Geology - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 723.5 Computer Applications - 931.1 Mechanics
 DOI: 10.4028/www.scientific.net/AMM.295-298.2112
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 8.
 Accession number: 20131216133853
 Title: Smoke detection based on multi-feature fusion
 Authors: Wu, Dongmei1 ; Wang, Nana1 ; Yan, Hongmei1/;王娜娜;
 Author affiliation: 1 Dept. of Communication, Xi-an University of Technology and Science,

Xi'an, China

Corresponding author: Wu, D.

Source title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Abbreviated source title: Int. Congr. Image Signal Process., CISP

Monograph title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Issue date: 2012

Publication year: 2012

Pages: 220-223

Article number: 6469792

Language: English

ISBN-13: 9781467309622

Document type: Conference article (CA)

Conference name: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Conference date: October 16, 2012 - October 18, 2012

Conference location: Chongqing, China

Conference code: 96020

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: This paper discusses the application of the video image processing technology which is applied to the fire protection system. Using the characteristics of the image of the smoke when the fire broke out in the video sequence, the video monitoring scene was detected intelligently and real-time. In this paper three features of smoke were extracted: the growth of the area in the smoke spread, the irregular contour feature of the smoke region and the blurred background. These three dynamic characteristics is fused by a BP neural network to determine if there is smoke or not. The experimental results show that the algorithm in this article can identify smoke in video accurately, effectively and in real time. © 2012 IEEE.

Number of references: 6

Main heading: Smoke

Controlled terms: Image processing - Neural networks

Uncontrolled terms: BP neural networks - Contour features - Dynamic characteristics - Fire protection system - Multi-feature fusion - Smoke detection - Video image processing - Video monitoring

Classification code: 723.4 Artificial Intelligence - 741 Light, Optics and Optical Devices - 804 Chemical Products Generally

DOI: 10.1109/CISP.2012.6469792

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131216133989

Title: A multi-scale Conditional Random Field model for human action recognition

Authors: Zhang, Erhu1 ; Zhao, Yanqing1/张二虎;

Author affiliation: 1 Department of Information Science, Xi'an University of Technology, Xi'an, China

Corresponding author: Zhang, E.

Source title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Abbreviated source title: Int. Congr. Image Signal Process., CISP

Monograph title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Issue date: 2012

Publication year: 2012

Pages: 77-81

Article number: 6469928

Language: English

ISBN-13: 9781467309622

Document type: Conference article (CA)

Conference name: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Conference date: October 16, 2012 - October 18, 2012

Conference location: Chongqing, China

Conference code: 96020

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Human action recognition is an important issue in the field of computer vision. But the existing models put more emphasis on the single scale and little attention on multi-scale and multi-action mode in the motion. With an aim at this problem, this paper presents a human motion recognition method using multi-scale condition random field model. At the first, the trajectory of human movement, the human body posture characteristics as well as the limb movement are considered in order to extract the multi-scale feature. Then a multi-scale Conditional Random Fields model is proposed for human action recognition. The model can take full advantage of the context information of the action sequences, as well as mutual constraints and impact of information between different scales, and can solve the problem that people have multi-action at the same time. © 2012 IEEE.

Number of references: 12

Main heading: Motion estimation

Controlled terms: Feature extraction - Gesture recognition - Image segmentation - Random processes - Signal processing

Uncontrolled terms: Conditional random field - Context information - Human body postures - Human motion recognition - Human-action recognition - Multi-scale features - Mutual constraints - Random field model

Classification code: 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 741.1 Light/Optics - 922.1 Probability Theory

DOI: 10.1109/CISP.2012.6469928

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20131216134971

Title: Microstructure and mechanical properties of joints of X100 line pipe by submerged arc welding

Authors: Zhang, Min¹ ; Yang, Liang¹/张敏;杨亮

Author affiliation: 1 College of Material Science and Engineering, Xi'an University of

Technology, Xi'an, 710048, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 310

Monograph title: Engineered Technologies in Materials Science, Geotechnics, Environment and Mechanical Engineering

Issue date: 2013

Publication year: 2013

Pages: 139-144

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037856697

Document type: Conference article (CA)

Conference name: 2012 International Conference on Engineering Materials, Geotechnical Engineering and Environmental Engineering, EMGEEE 2012

Conference date: October 26, 2012 - October 28, 2012

Conference location: Shijiazhuang, Hebei, China

Conference code: 96002

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: The microstructure, mechanical properties, fracture morphology and crystal texture of pipeline steel X100 welded joints were investigated using optical electron microscope, scanning electron microscope, tensile and impact testing machine. The results show that, the texture of X100 line pipe mainly consists of acicular ferrite and granular bainite in weld zones, the microstructure of HAZ is coarser, which lead to softening and embrittlement. The fusion line is clear between outer weld and inner weld. The tensile strength of welded joint gets to 803 MPa, which is about 94.81% of the base materials. The impact energy at -10°C is more than 120J, and the average of percent shear fracture appearance at -10°C is up to 85%, is ductile fractures. © (2013) Trans Tech Publications, Switzerland.

Number of references: 5

Main heading: Microstructure

Controlled terms: Ductile fracture - Geotechnical engineering - Heat affected zone - Impact testing - Mechanical properties - Offshore pipelines - Scanning electron microscopy - Submerged arc welding - Tensile strength - Welding

Uncontrolled terms: Acicular ferrite - Fracture morphology - Granular bainites - Impact testing machines - Microstructure and mechanical properties - Properties - Scanning Electron Microscope - X100

Classification code: 951 Materials Science - 933 Solid State Physics - 741.1 Light/Optics - 619.1 Pipe, Piping and Pipelines - 538.2.1 Welding Processes - 538.2 Welding - 483 Soil Mechanics and Foundations - 481 Geology and Geophysics - 422.2 Strength of Building Materials : Test Methods - 421 Strength of Building Materials; Mechanical Properties - 409 Civil Engineering, General

DOI: 10.4028/www.scientific.net/AMM.310.139

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20131216133992

Title: Face recognition based on a novel illumination normalization method

Authors: Zhao, Minghua¹ ; Wang, Li²/赵明华;王理

Author affiliation: 1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 Graduate School, Xi'an University of Technology, Xi'an, China

Corresponding author: Zhao, M.

Source title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Abbreviated source title: Int. Congr. Image Signal Process., CISP

Monograph title: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Issue date: 2012

Publication year: 2012

Pages: 434-438

Article number: 6469931

Language: English

ISBN-13: 9781467309622

Document type: Conference article (CA)

Conference name: 2012 5th International Congress on Image and Signal Processing, CISP 2012

Conference date: October 16, 2012 - October 18, 2012

Conference location: Chongqing, China

Conference code: 96020

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: A novel illumination normalization method is proposed in this paper to deal with illumination variations in face recognition. Firstly, Discrete cosine transform (DCT) is used on the original images in logarithm domain. Direct current (DC) coefficient is reset and some low frequency alternating current (AC) coefficients are set as zero to eliminate illumination variations in large areas. Secondly, local normalization method is used on the inverse discrete cosine transform images to minimize illumination variations in small areas. Experimental results show that the proposed method can eliminate effect of illumination variations effectively and improve performance of face recognition methods significantly. The proposed method be used to eliminate the effect of illumination variations before face recognition. © 2012 IEEE.

Number of references: 11

Main heading: Face recognition

Controlled terms: Discrete cosine transforms - Signal processing

Uncontrolled terms: Alternating current coefficients - Discrete Cosine Transform(DCT) - Face recognition methods - Illumination normalization - Illumination variation - Improve performance - Inverse discrete cosine transforms - Normalization methods

Classification code: 716 Telecommunication; Radar, Radio and Television - 716.1

Information Theory and Signal Processing - 921.3 Mathematical Transformations

DOI: 10.1109/CISP.2012.6469931

Database: Compendex
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20130405 新增 10 条

1.

Accession number: 20131316153311

Title: Influence of pulse discharge strength on microstructure of Cr films deposited by magnetron sputtering

Authors: Cao, Zheng¹; Jiang, Bai-Ling¹; Shen, Jian-Dong¹; Ning, Fu-Ping¹; Zhang, Qian¹/曹政; 蒋百灵;沈建东;宁富平;张潜

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710016, China

Corresponding author: Jiang, B.-L. (Jiangbail@vip.163.com)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 157-161

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: Cr films were deposited under three different Ar pulse abnormal glow discharge strength conditions (monopulse peak target power density: 10 W/cm², 30 W/cm² and 70 W/cm²) by increasing pulse target voltage (600 V, 700 V and 800 V) in pulse unbalanced magnetron sputtering environment. SEM, AFM, XRD and TEM were used to compare the difference of microstructure of the Cr films deposited under the different conditions. As Ar pulse abnormal glow discharge was strength enhanced, Cr film deposition rate was increased dramatically. Meanwhile, the surface roughness of the films was slightly increased. Moreover, the surface particles size was homogeneous but not increased. Besides, preferred orientation Cr (110) diffraction peak strength was decreased obviously, which meant crystallization effect becoming worse. Cr films exhibited columnar growth and nanoscale grains (5-10 nm) were setting type distribution into film.

Number of references: 19

Main heading: Deposits

Controlled terms: Film growth - Glow discharges - Magnetron sputtering - Microstructure - Surface roughness

Uncontrolled terms: Abnormal glow discharge - CR film - Crystallization effects -

Preferred orientations - Pulse - Strength condition - Target power density - Unbalanced magnetron sputtering

Classification code: 951 Materials Science - 933 Solid State Physics - 931.2 Physical

Properties of Gases, Liquids and Solids - 715.1 Electronic Equipment, non-communication -
712.1 Semiconducting Materials - 701.1 Electricity: Basic Concepts and Phenomena - 617
Turbines and Steam Turbines - 612 Engines - 532 Metallurgical Furnaces

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131316153809

Title: A research on the dwell time calculation model of metro trains

Authors: Hei, Xinhong¹ ; Tian, Chenghua¹ ; Ma, Weigang¹ ; Wang, Lei¹/黑新宏;;马伟刚;王磊

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of
Technology, P.O. Box 666, No. 5, South Jinhua Road, Xi'an 710048, China

Corresponding author: Hei, X. (heixinhong@xaut.edu.cn)

Source title: ICIC Express Letters

Abbreviated source title: ICIC Express Lett.

Volume: 7

Issue: 3 A

Issue date: 2013

Publication year: 2013

Pages: 825-830

Language: English

ISSN: 1881803X

Document type: Journal article (JA)

Publisher: ICIC Express Letters Office, Tokai University, Kumamoto Campus, 9-1-1, Toroku,
Kumamoto, 862-8652, Japan

Abstract: Based on actual observation of the boarding and alighting time of passengers at Xi'an metro station firstly, this paper analyzes the dwell process of metro trains, then analyzes the time of sub-process in detail and builds a dwell time calculation model. Finally, the paper verifies the established model with the observed station dwell time of metro trains. The model can provide the basic data support for metro companies to dispatch trains reasonably and improve the efficiency of metro trains. Also, it can be used for metro train operation simulation and the metro network evaluation. © 2013 ICIC International.

Number of references: 11

Main heading: Subway stations

Controlled terms: Computer science - Technology

Uncontrolled terms: Calculation models - Dwell process - Dwell time - Metro -
Metro networks - Metro stations - Number of passengers - Station dwell time

Classification code: 402.2 Public Buildings - 721 Computer Circuits and Logic Elements -
722 Computer Systems and Equipment - 723 Computer Software, Data Handling and
Applications - 901 Engineering Profession

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131316151319

Title: Simulation of near-infrared photodiode detectors based on β -FeSi 2/4H-SiC

heterojunctions

Authors: Pu, Hong-Bin¹ ; He, Xin¹ ; Quan, Ru-Dai¹ ; Cao, Lin¹ ; Chen, Zhi-Ming¹/蒲红斌;何欣;;曹琳;陈治明

Author affiliation: 1 Department of Electronic Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Pu, H.-B. (puhongbin@xaut.edu.cn)

Source title: Chinese Physics B

Abbreviated source title: Chin. Phys.

Volume: 22

Issue: 3

Issue date: March 2013

Publication year: 2013

Article number: 037301

Language: English

ISSN: 16741056

Document type: Journal article (JA)

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: In this paper, we propose a near-infrared p-type β -FeSi₂/n-type 4H-SiC heterojunction photodetector with semiconducting silicide (β -FeSi₂) as the active region for the first time. The optoelectronic characteristics of the photodetector are simulated using a commercial simulator at room temperature. The results show that the photodetector has a good rectifying character and a good response to near-infrared light. Interface states should be minimized to obtain a lower reverse leakage current. The response spectrum of the β -FeSi₂/4H-SiC detector, which consists of a p-type β -FeSi₂ absorption layer with a doping concentration of $1 \times 10^{15} \text{ cm}^{-3}$ and a thickness of $2.5 \mu\text{m}$, has a peak of 755 mA/W at $1.42 \mu\text{m}$. The illumination of the SiC side obtains a higher responsivity than that of the β -FeSi₂ side. The results illustrate that the β -FeSi₂/4H-SiC heterojunction can be used as a near-infrared photodetector compatible with near-infrared optically-activated SiC-based power switching devices. © 2013 Chinese Physical Society and IOP Publishing Ltd.

Number of references: 23

Main heading: Heterojunctions

Controlled terms: Infrared detectors - Photons - Silicides - Silicon carbide

Uncontrolled terms: Commercial simulators - Heterojunction photodetectors - Near Infrared - Near-infrared photodiodes - Optoelectronic characteristics - Power switching devices - Reverse leakage current - Spectral response

Classification code: 714.2 Semiconductor Devices and Integrated Circuits - 741.1

Light/Optics - 741.3 Optical Devices and Systems - 804 Chemical Products Generally - 804.2 Inorganic Compounds

DOI: 10.1088/1674-1056/22/3/037301

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131316144069

Title: Correlation between grain boundary misorientation and M23C6 precipitation behaviors in a wrought Ni-based superalloy

Authors: Tang, Bin1 ; Jiang, Li1 ; Hu, Rui1 ; Li, Qi2/;;;

Author affiliation: 1 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, 127 Youyi Xilu, Xi'an, Shaanxi 710072, China

2 School of Material Science and Engineering, Xi'an University of Technology, 5 South Jinhua Road, Xi'an, Shaanxi 710048, China

Corresponding author: Tang, B. (toby198489@163.com)

Source title: Materials Characterization

Abbreviated source title: Mater Charact

Volume: 78

Issue date: 2013

Publication year: 2013

Pages: 144-150

Language: English

ISSN: 10445803

CODEN: MACHEX

Document type: Journal article (JA)

Publisher: Elsevier Inc., 360 Park Avenue South, New York, NY 10010, United States

Abstract: The correlation between the grain boundary misorientation and the precipitation behaviors of intergranular M23C6 carbides in a wrought Ni-Cr-W superalloy was investigated by using the electron backscattered diffraction (EBSD) technique. It was observed that the grain boundaries with a misorientation angle less than 20, as well as all coincidence site lattice (CSL) boundaries, are immune to precipitation of the M23C6 carbides; in contrast, the random high-angle grain boundaries with a misorientation angle of 20 -40 provide preferential precipitation sites of the M23C6 carbides at the random high-angle grain boundaries with a higher misorientation angle of 55 -60 $^{\circ}$ /[2 2 3] turn to retard precipitation of M23C6 carbides owing to their nature like the Σ 3 grain boundaries and retard the precipitation of M23C6 carbides. The low-angle and certain random grain boundary segments induced by twins were found to interrupt the precipitation of the M23C6 carbides along the high-angle grain boundaries. © 2013 Elsevier Inc.

Number of references: 29

Main heading: Lasers

Controlled terms: Carbides - Electron diffraction - Grain boundaries - Nickel - Superalloys - Superconducting materials

Uncontrolled terms: Coincidence site lattices - Electron back-scattered diffraction - Grain boundary misorientation - High angle grain boundaries - Misorientation angle - Ni-cr-w superalloys - Precipitation behavior - Random grain boundaries

Classification code: 932.2 Nuclear Physics - 812.1 Ceramics - 744.1 Lasers, General - 708.3 Superconducting Materials - 548.1 Nickel - 531.2 Metallography - 531 Metallurgy and Metallography

DOI: 10.1016/j.matchar.2013.02.006

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131316142122

Title: Magnetic hysteresis loss and corrosion behavior of LaFe_{11.5}Si_{1.5} particles coated with Cu

Authors: Tian, N.1 ; Zhang, N.N.1 ; You, C.Y.1 ; Gao, B.2 ; He, J.3/田娜;张娜娜;游才印;高博;何俊

Author affiliation: 1 School of Materials Science and Technology, Xian University of Technology, Xian 710048, China

2 School of Science, Xian Jiaotong University, Xian 710049, China

3 Division of Functional Materials, Central Iron and Steel Research Institute, Beijing 100081, China

Corresponding author: You, C.Y. (caiyinyou@xaut.edu.cn)

Source title: Journal of Applied Physics

Abbreviated source title: J Appl Phys

Volume: 113

Issue: 10

Issue date: March 14, 2013

Publication year: 2013

Article number: 103909

Language: English

ISSN: 00218979

CODEN: JAPIAU

Document type: Journal article (JA)

Publisher: American Institute of Physics, 2 Huntington Quadrangle, Suite N101, Melville, NY 11747-4502, United States

Abstract: The existence of porosity is useful for releasing the strain during the magnetization and demagnetization processes of La(Fe, Si)₁₃-based magnetocaloric materials, resulting in the decreases of magnetic hysteresis loss and the improvement of mechanical stability. But the porosity would affect the heat transfer and corrosion behavior. In this work, we studied the effect of highly plastic Cu coating on the magnetocaloric properties and corrosion resistance of LaFe_{11.5}Si_{1.5} particles. It was found that Cu coating had less influence on the magnetic entropy changes, but presented a less magnetic hysteresis loss. Under a maximum field of 1.5 T, both particles with and without coating showed the similar magnetic entropy changes of 8 J/kg K. Magnetic hysteresis loss was decreased from 2.2 to 1.8 J/kg after Cu coating. The corrosion current density was decreased and the corrosion potential was increased, indicating an improvement of the corrosion resistance with Cu coating. © 2013 American Institute of Physics.

Number of references: 14

Main heading: Magnetic hysteresis

Controlled terms: Coatings - Corrosion resistance - Corrosive effects -

Demagnetization - Entropy - Lanthanum alloys - Silicon

Uncontrolled terms: Corrosion behavior - Corrosion current densities - Corrosion potentials - Cu coatings - Demagnetization process - Magnetic entropy change - Magnetocaloric materials - Magnetocaloric properties

Classification code: 803 Chemical Agents and Basic Industrial Chemicals - 712.1.1 Single Element Semiconducting Materials - 701.2 Magnetism: Basic Concepts and Phenomena - 804 Chemical Products Generally - 641.1 Thermodynamics - 539.1 Metals Corrosion -

539 Metals Corrosion and Protection; Metal Plating - 547.2 Rare Earth Metals

DOI: 10.1063/1.4795265

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131216137586

Title: Cloud droplets evolutionary algorithm on reciprocity mechanism for function optimization

Authors: Wang, Lei1 ; Li, Wei1 ; Fei, Rong1 ; Hei, Xinghong1/王磊;李伟;费蓉;黑新红

Author affiliation: 1 Faculty of Computer Science and Engineering, Xi'an University of Technology, China

Corresponding author: Wang, L. (leiwang@xaut.eud.cn)

Source title: Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)

Abbreviated source title: Lect. Notes Comput. Sci.

Volume: 7331 LNCS

Issue: PART 1

Monograph title: Advances in Swarm Intelligence - Third International Conference, ICSI 2012, Proceedings

Issue date: 2012

Publication year: 2012

Pages: 268-275

Language: English

ISSN: 03029743

E-ISSN: 16113349

ISBN-13: 9783642309755

Document type: Conference article (CA)

Conference name: 3rd International Conference on Swarm Intelligence, ICSI 2012

Conference date: June 17, 2012 - June 20, 2012

Conference location: Shenzhen, China

Conference code: 96080

Sponsor: Shenzhen University; Peking University; Xi'an Jiaotong-Liverpool University

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: For the problems of solving difficult problems in evolutionary algorithms such as easily falling into local optimum, premature convergence because of selective pressure, a complex and larger calculation and a lower accuracy of the solution, this paper proposes cloud droplets evolutionary model on reciprocity mechanism (CDER). The main idea of CDER is to simulate the phase transition of the cloud in nature which has vapor state, liquid state and solid state, and to combine the basic ideas of evolutionary computation to realize the population evolution. The condensation growth and collision growth of cloud droplets correspond to the competitive evolution and reciprocal evolution of species in nature. Experiments on solving the function optimization problems show that this model can enhance the individual competition and survival ability, guarantee the population diversity, accelerate the convergence speed and improve the solution precision through the iterative process of competition mechanism and reciprocity mechanism. © 2012 Springer-Verlag.

Number of references: 13

Main heading: Problem solving

Controlled terms: Drops - Evolutionary algorithms - Iterative methods - Optimization
- Phase transitions - Vapors

Uncontrolled terms: Cloud droplets - Competition mechanism - Function Optimization
- Function optimization problems - Population diversity - Population evolution -

Pre-mature convergences - Reciprocity mechanisms

Classification code: 443.1 Atmospheric Properties - 723 Computer Software, Data Handling
and Applications - 801.4 Physical Chemistry - 804 Chemical Products Generally - 921
Mathematics

DOI: 10.1007/978-3-642-30976-2_32

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20131216138363

Title: Effect of firing temperature on microstructure and superconductivity of YBCO films
derived from low-fluorine solution

Authors: Wu, Chuanbao1 ; Zhao, Gaoyang1 ; Chen, Yuanqing1/;赵高扬;陈源清

Author affiliation: 1 Department of Materials Physics and Chemistry, Xi'an University of
Technology, Xi'an, Shanxi, 710048, China

Corresponding author: Wu, C. (wuchuanbao015@163.com)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 745-746

Monograph title: Advances in Functional and Electronic Materials

Issue date: 2013

Publication year: 2013

Pages: 243-248

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856079

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96127

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Using a low-fluorine solution, YBa₂Cu₃O_{7-x} (YBCO) superconducting films were prepared on LaAlO₃ (LAO) substrates by dip-coating method. YBCO films were fired at different temperatures with same oxygen pressure of 1.3 vol% and water vapor pressure of 7.4 vol%. Effect of firing temperature on film microstructure and superconductivity was investigated. The results indicated that YBCO films with high-degree c-axis orientation (the degree of c-axis orientation reached 96%) can be obtained when heat treated at 800 °C. At this temperature YBCO films were

grown on LAO with cubic-on-cubic mode, resulting in a high critical transition temperature (T_c) of 91.5 K, and critical current density (J_c) of larger than 1 MA/cm². However, when fired at lower temperatures, YBCO film tended to form a-axis grains, which degraded J_c of films. And a higher heat treatment temperature also depressed superconductivity of YBCO films. © (2013) Trans Tech Publications, Switzerland.

Number of references: 15

Main heading: Superconducting films

Controlled terms: Critical current density (superconductivity) - Crystal orientation - Fluorine - Microstructure - Superconducting materials - Superconductivity - Yttrium barium copper oxides

Uncontrolled terms: C-axis orientations - Critical transition temperatures - Dipcoating methods - Film microstructures - Firing temperature - Lower temperatures - Oxygen pressure - YBa₂Cu₃O_{7-x}

Classification code: 933.1.1 Crystal Lattice - 933 Solid State Physics - 804.2 Inorganic Compounds - 951 Materials Science - 804 Chemical Products Generally - 708.3 Superconducting Materials - 701.1 Electricity: Basic Concepts and Phenomena - 708.3.1 High Temperature Superconducting Materials

DOI: 10.4028/www.scientific.net/MSF.745-746.243

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20131316153151

Title: Effects of heat treatment on microstructure and microhardness of Mg-3Sn-1Y alloy

Authors: Xu, Chun-Jie¹; Tu, Tao¹; Ma, Tao¹; Yu, Ling¹; Zhang, Zhong-Ming¹; Wang, Jin-Cheng²/徐春杰;屠涛;马涛;余玲;张忠明;王锦程

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

Corresponding author: Xu, C.-J. (xuchunjie@gmail.com)

Source title: Zhongguo Youse Jinshu Xuebao/Chinese Journal of Nonferrous Metals

Abbreviated source title: Zhongguo Youse Jinshu Xuebao

Volume: 23

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 9-14

Language: Chinese

ISSN: 10040609

CODEN: ZYJXFK

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: A nominal composition of Mg-3Sn-1Y (mass fraction, %) magnesium alloy was prepared by casting with flux protection in electric-resistance furnace. The microstructures

as-cast, solution treatment and aging hardening of the Mg-3Sn-1Y alloy by different aging treatments after solution treatment were investigated by an Olympus GX71 optical microscope (OM), an FEI QUANTA 400 scanning electron microscope (SEM) equipped with an energy-dispersive X-ray spectroscopy (EDS), a RigakuD/max-3C X-ray diffraction (XRD), a TUKON2100 Vickers hardness tester and a CRY-2P differential thermal analyzer (DTA). The results show that as-cast Mg-3Sn-1Y alloy consists of dendritic α -Mg and intermittent mesh inter-dendrite boundaries Mg₂Sn phase, the dispersion tiny particles and fine rod-shaped MgSnY phase. After the solution treatment, the Mg₂Sn phase is completely redissolved, and the MgSnY phase with the high temperature stability still distributes in the matrix. The addition of yttrium elements can improve the high temperature stability of Mg-Sn alloy. Mg-3Sn-1Y alloy exhibits obvious aging hardening characteristics. The increase of the aging temperature is advantageous to the occurrence of aging hardening peak to some extent. On the contrary, grain growth of the matrix will decrease the function of separation and strengthening and delay the appearance of aging hardening peak as the ageing temperature is too high.

Number of references: 17

Main heading: Tin alloys

Controlled terms: Alloys - Cerium alloys - Differential thermal analysis - Grain growth - Hardening - Magnesium - Magnesium alloys - Microstructure - Scanning electron microscopy - Tin - X ray diffraction

Uncontrolled terms: Aging hardening - Differential thermal analyzers - Effects of heat treatment - Energy dispersive x-ray - High temperature stability - Optical microscopes - Solution heat treatment - Solution treatments

Classification code: 933 Solid State Physics - 801 Chemistry - 741.1 Light/Optics - 547.2 Rare Earth Metals - 951 Materials Science - 546.2 Tin and Alloys - 537.1 Heat Treatment Processes - 531.2 Metallography - 531.1 Metallurgy - 542.2 Magnesium and Alloys

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131216137619

Title: Brain storm optimization algorithm for multi-objective optimization problems

Authors: Xue, Jingqian¹; Wu, Yali¹; Shi, Yuhui²; Cheng, Shi²/薛敬千;吴亚丽;;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Shaanxi, China

2 Dept. of Electrical and Electronic Engineering, Xi'an Jiaotong-Liverpool University, Suzhou, China

Corresponding author: Xue, J. (jingqian.xue@hotmail.com)

Source title: Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)

Abbreviated source title: Lect. Notes Comput. Sci.

Volume: 7331 LNCS

Issue: PART 1

Monograph title: Advances in Swarm Intelligence - Third International Conference, ICSI 2012, Proceedings

Issue date: 2012
Publication year: 2012
Pages: 513-519
Language: English
ISSN: 03029743
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ISBN-13: 9783642309755
Document type: Conference article (CA)
Conference name: 3rd International Conference on Swarm Intelligence, ICSI 2012
Conference date: June 17, 2012 - June 20, 2012
Conference location: Shenzhen, China
Conference code: 96080
Sponsor: Shenzhen University; Peking University; Xi'an Jiaotong-Liverpool University
Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany
Abstract: In this paper, a novel multi-objective optimization algorithm based on the brainstorming process is proposed(MOBSO). In addition to the operations used in the traditional multi-objective optimization algorithm, a clustering strategy is adopted in the objective space. Two typical mutation operators, Gaussian mutation and Cauchy mutation, are utilized in the generation process independently and their performances are compared. A group of multi-objective problems with different characteristics were tested to validate the effectiveness of the proposed algorithm. Experimental results show that MOBSO is a very promising algorithm for solving multi-objective optimization problems. © 2012 Springer-Verlag.
Number of references: 13
Main heading: Algorithms
Controlled terms: Artificial intelligence - Multiobjective optimization
Uncontrolled terms: Algorithm for solving - Clustering strategy - Gaussian mutation - Generation process - Multi-objective optimization problem - Multi-objective problem - Mutation operators - Optimization algorithms
Classification code: 723 Computer Software, Data Handling and Applications - 723.4 Artificial Intelligence - 921 Mathematics - 921.5 Optimization Techniques
DOI: 10.1007/978-3-642-30976-2_62
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
10.
Accession number: 20131316146333
Title: Influence of annealing time on microstructure of Ni-W alloys
Authors: Zhang, Qiao1 ; Liang, Shuhua1 ; Zhang, Chen1 ; Zou, Juntao1/;梁淑华;;邹军涛
Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China
Corresponding author: Zhang, Q. (zhqiao00@163.com)
Source title: Materials Science Forum
Abbreviated source title: Mater. Sci. Forum
Volume: 747-748
Monograph title: High Performance Structure Materials

Issue date: 2013

Publication year: 2013

Pages: 613-618

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856086

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96128

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The as-cast Ni-W alloys with 15wt%W, 25wt%W and 30wt%W were annealed in hydrogen at 1100°C. The effect of the annealing time on the microstructure of Ni-W alloys was studied, and the phase constituents and microstructure of annealed Ni-W alloys were characterized by the X-ray diffraction (XRD) and scanning electron microscopy (SEM). The results showed that no any phase changed for Ni-15%W, Ni-25%W and Ni-30%W alloys annealed for 60 min, 90 min and 150 min, which were still consisted of single-phase Ni(W) solid solution. However, microstructure had a significant change after annealing. With increase of annealing time, the microstructure of Ni-15%W alloy became more uniform after annealing for 90 min, and the average grain size was 95µm, whereas the grain size of Ni-15%W alloy increased significantly after annealing for 150 min. For Ni-25%W and Ni-30%W, there was no obvious change on the grain size with increase of annealing time, and the amount of oxides at grain boundaries gradually reduced. After annealing for 150 min, the impurities at grain boundaries almost disappeared. Subsequently, the annealing at 1100°C for 150 min was beneficial for the desired microstructure of Ni-25%W and Ni-30%W alloys. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Nickel

Controlled terms: Annealing - Grain boundaries - Grain size and shape -

Microstructure - Scanning electron microscopy - Tungsten alloys - X ray diffraction

Uncontrolled terms: Annealing time - As-cast - Average grain size - Grain size - Ni-W alloy - Phase constituent

Classification code: 537.1 Heat Treatment Processes - 543.5 Tungsten and Alloys - 548.1

Nickel - 741.1 Light/Optics - 933 Solid State Physics - 951 Materials Science

DOI: 10.4028/www.scientific.net/MSF.747-748.613

Database: Compendex

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20130412 新增 13 条

1.

Accession number: 20131416174652

Title: Hole injection layer effect on red OLED performance

Authors: An, Tao1 ; Nan, Jing-Biao1 ; Xia, Yan-Feng1 ; Gao, Yong1/安涛;南晶彪;夏艳峰;高勇

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Nan, J.-B. (xiayanfeng_8@163.com)

Source title: Guangzi Xuebao/Acta Photonica Sinica

Abbreviated source title: Guangzi Xuebao

Volume: 42

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 24-28

Language: Chinese

ISSN: 10044213

CODEN: GUXUED

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: Preparation of high efficiency, high brightness red organic light emitting diode is the key to realize full color display, and high performance red organic light emitting diode device has a great significance for the study. This paper mainly studies the doping agent (DCJTB) concentration on red organic light emitting diode performance influence. In the experiment, using vacuum thermal evaporation method, the selection of structure for ITO/2-TNATA(20 nm)/NPB(30 nm)/AlQ(50 nm):(X%)DCJTB/AlQ(30 nm)/LiF(0.8 nm)/Al(100 nm) red device, the organic thin film function material precise evaporation is realized, in high accuracy film thickness control instrument monitoring. Research shows that: red dopant doping concentration is 2.5%~3.0%, the 12 V voltage can be obtained under luminous intensity to a maximum of 8900 cd/m², luminous efficiency is more than 2.8 cd/A, and luminous spectral wavelength for 610~618 nm ideal red organic light emitting diode device.

Number of references: 10

Main heading: Organic light emitting diodes (OLED)

Controlled terms: Display devices - Electron injection - Luminance

Uncontrolled terms: 2-TNATA - Doping concentration - Full-color displays - Hole injection layers - Luminous efficiency - Organic thin films - Red-OLED - Vacuum thermal evaporation

Classification code: 722.2 Computer Peripheral Equipment - 741.1 Light/Optics - 744.4.1 Semiconductor Lasers

DOI: 10.3788/gzxb20134201.0024

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131416175052

Title: Study on distribution characteristics of Nitrogen and Phosphorus in irrigation runoff from double-cropping late rice field

Authors: Chen, Cheng-Guang¹; Zhao, Qing-Zhou²; Hu, Bao-Wei¹/陈成广;赵轻舟;胡保卫

Author affiliation: 1 Shaoxing University, Shaoxing 312000, China

2 Xi'an University of Technology, Xi'an 71004, China

Corresponding author: Hu, B.-W. (hbw@zscas.edu.cn)

Source title: Shuili Xuebao/Journal of Hydraulic Engineering

Abbreviated source title: Shuili Xuebao

Volume: 44

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 238-242

Language: Chinese

ISSN: 05599350

CODEN: SLHPBI

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: Taking the double-cropping late rice field in the Cao'e Riven basin of Shaoxing, Zhejiang as the research object, the distribution of the concentrations of nitrogen (TN, NO₃--N, NH₄+-N) and TP (total P) in farmland runoff from diversion system, field stagnant water, and drainage system were studied under the irrigation in the growing season of late rice; and the effects of straw mulch on the nitrogen and phosphorus loss in bare farmland were investigated. The results show that (1) during the growing season of late rice, the NO₃--N was the main form of the dissolved nitrogen loss in irrigation runoff, which accounted for 63.2%~92.9% of TN, while the NH₄+-N only accounted for 5.1%~32.1% with an order of decreasing concentration of field stagnant water>drainage system>diversion system; (2) the TP concentration in the drainage system decreased stepwise by 14%~26% in the growing season, during which the phosphorus loss was slighter in the jointing-booting period, but was larger in the greening-tillering and heading-filling periods; (3) the straw mulch on the bare farmland significantly reduced the nitrogen loss, but it showed little effect on the TP concentration in farmland runoff.

Number of references: 15

Main heading: Agricultural runoff

Controlled terms: Drainage - Farms - Irrigation - Nitrogen - Phosphorus

Uncontrolled terms: Dissolved nitrogen - Distribution characteristics - Diversion systems - Double-cropping late rice - Growing season - Nitrogen and phosphorus - Nitrogen and phosphorus loss - Straw mulch

Classification code: 401 Bridges and Tunnels - 406 Highway Engineering - 442 Flood Control; Land Reclamation - 502 Mines and Quarry Equipment and Operations - 804 Chemical Products Generally - 821 Agricultural Equipment and Methods; Vegetation and Pest Control

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131416161898

Title: Hydraulic performance experiment of an adaptive drip irrigation emitter

Authors: Feng, Junjie^{1, 2}; Fei, Liangjun¹; Deng, Zhong²; Lü, Mouchao²; Jia, Yanhui²; Liu, Yang²/冯俊杰;费良军;邓忠;吕谋超;贾艳辉;刘杨

Author affiliation: 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Key Laboratory of Water-Saving Agriculture of Henan Province, Farmland Irrigation Research Institute, Chinese Academy of Agricultural Sciences, Xinxiang 453003, China

Corresponding author: Feng, J. (fjdg@sina.com)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 4

Issue date: February 15, 2013

Publication year: 2013

Pages: 87-94

Language: Chinese

ISSN: 10026819

CODEN: NGXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: An adaptive drip irrigation emitter is a new type of emitter which uses the multi-use function of flow compensation and the flow adaptive. In order to examine the effect of self-adjustment automatically on an adaptive drip irrigation emitter, we studied the hydraulic performance of the type of AD-1 adaptive drip irrigation emitter under two different operating modes of the flow compensation and the flow adaptive according to the working mechanism of the adaptive drip irrigation emitter by using the negative pressure suction pump to simulate the soil suction. The tests examined the flow rate uniformity, the relation between the supply water pressure and drip flow, and the relation between simulated soil negative pressure and drip flow on the adaptive drip irrigation emitter which the simulated soil negative pressure was formed by suction pump. At the same time, we had analyzed the suitable supply water pressure. The results showed that: the adding of drip state control structure not only retained the general flow compensation characteristic of drip irrigation emitter, but also added in advantages including multi-use functions of soil moisture monitoring, intelligent controlling irrigation and automatic adjustment of drip flow. At the mode of flow compensation, the flow rate of emitter was 14.71 L/h, the coefficient of uniformity was higher, the coefficient of flow deviation was 9.79% when the supply water pressure was rated 100 kPa. At the mode of flow adaptive, the emitter can begin working normally when the two pressures were acting together, and when the supply water pressure was only 30 kPa and the minimum soil suction of 20 kPa. The coefficient of flow uniformity also stayed steady. Then we determined the minimum and the maximum suitable water supply pressure was 30 and 50 kPa respectively. Moreover, it can adjust the drip flow rate automatically and in a timely manner at the range of 0-11.22 L/h according to the actual soil moisture status at the range of suitable water supply pressure 30-50 kPa. Unlike conventional irrigation emitters, the adaptive drip irrigation emitter can better change the working mode of dripping water passively and the technology of the irrigation system was improved to the level of accurate and precision irrigation, and achieved the aim of fetching water initiatively according to the needs of the crop and soil. Therefore, all of above characteristics are not only ensuring the supply of the suitable soil moisture during the normal growth of a crop, but also promoting the

further development of an irrigation system application mode in the direction of more intelligence and more automation.

Number of references: 29

Main heading: Irrigation

Controlled terms: Crops - Flow rate - Intelligent control - Soil moisture - Soils - Water supply

Uncontrolled terms: Automatic adjustment - Coefficient of uniformity - Drip irrigation - Hydraulic performance - Hydraulic performance experiments - Precision irrigation - Soil moisture monitoring - Soil moisture status

Classification code: 446.1 Water Supply Systems - 483.1 Soils and Soil Mechanics - 631 Fluid Flow - 731.1 Control Systems - 821.3 Agricultural Methods - 821.4 Agricultural Products

DOI: 10.3969/j.issn.1002-6819.2013.04.011

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131416157701

Title: Elasto-plastic indentation of a half-space by a rigid sphere under normal and torque loading

Authors: Li, Pengyang^{1, 2}; Wang, Zhanjiang^{2, 3}; Li, Xiaoyong³; Jin, Xiaoqing²; Chen, W. Wayne²; Li, Yan¹; Wang, Q. Jane²/李鹏阳;王战江;;李言;

Author affiliation: 1 Department of Mechanical Engineering and Automation, Xi'an University of Technology, Xi'an, 710048, China

2 Department of Mechanical Engineering, Northwestern University, Evanston, IL 60208, United States

3 State Key Laboratory of Mechanical Transmission, Chongqing University, Chongqing, 400030, China

Corresponding author: Li, P. (lee.young0808@gmail.com)

Source title: Tribology International

Abbreviated source title: Tribol Int

Volume: 62

Issue date: 2013

Publication year: 2013

Pages: 141-148

Language: English

ISSN: 0301679X

CODEN: TRBIBK

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: This work presents a numerical study of a spinning rigid sphere pressed against an elasto-plastic half space under combined normal and torque loading. The von Mises stresses and equivalent plastic strain under different torques are investigated. Results show that the torque shifts the maximum von Mises stress and plastic region in the half space closer to the surface at larger friction coefficient. An empirical formula to predict the contact area is suggested. The

evolution of the plastic region in the half space is further examined. The region shows more complex shapes than those only under a normal load. © 2013 Elsevier Ltd.

Number of references: 36

Main heading: Loading

Controlled terms: Elastoplasticity - Geometry - Torque

Uncontrolled terms: Elastoplastic contact - Empirical formulas - Equivalent plastic strain
- Friction coefficients - Plastic regions - Spinning sphere - Torque loadings - Von Mises stress

Classification code: 421 Strength of Building Materials; Mechanical Properties - 672 Naval Vessels - 921 Mathematics

DOI: 10.1016/j.triboint.2013.02.015

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131416166889

Title: Circle fitting using a virtual source localization algorithm in wireless sensor networks

Authors: Liang, Junli1, 2 ; Zhang, Miaohua1 ; Zeng, Xianju3 ; Zhao, Kexin2 ; Li, Jian2/梁军利;张妙花;曾宪聚

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

2 University of Florida, Gainesville, FL 32611, United States

3 College of Management, Shenzhen University, Shenzhen 518060, China

Corresponding author: Liang, J. (heery_2004@hotmail.com)

Source title: International Journal of Distributed Sensor Networks

Abbreviated source title: Int. J. Distrib. Sens. Netw.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 203719

Language: English

ISSN: 15501329

E-ISSN: 15501477

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: A novel circle fitting algorithm is proposed in this paper. The key points of this paper are given as follows: (i) it formulates the circle fitting problem into the special source localization one in wireless sensor networks (WSN); (ii) the multidimensional scaling (MDS) analysis is applied to the data points, and thus the propagator-like method is proposed to represent the circle center parameters as the functions of the circle radius; (iii) the virtual source localization model can be rerepresented as special nonlinear equations of a unique variable (the circle radius) rather than the original three ones (the circle center and radius), and thus the classical fixed-point iteration algorithm is applied to determine the radius and the circle center parameters. The effectiveness of the proposed circle fitting approach is demonstrated using the simulation and experimental results. © 2013 Junli Liang et al.

Number of references: 13

Main heading: Wireless sensor networks

Controlled terms: Algorithms

Uncontrolled terms: Circle fitting - Circle fitting algorithm - Data points - Fixed-point iterations - Keypoints - Multidimensional scaling analysis - Source localization - Virtual sources

Classification code: 723 Computer Software, Data Handling and Applications - 732 Control Devices - 921 Mathematics

DOI: 10.1155/2013/203719

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131416175127

Title: Alignment growth mechanisms of rod-like ZnO on zinc substrates

Authors: Liu, Chang-You¹ ; Wang, Jin-Fang¹ ; Sun, Xiao-Yan¹ ; Wang, Ze-Wen² ; Jie, Wan-Qi¹/刘长友;王金芳;孙晓燕;王泽温;介万奇

Author affiliation: 1 State Key Laboratory of Solidification Processing, School of Materials Science and Engineering, Northwestern Polytechnical University, Xi'an 710072, China

2 College of Material Science and Engineering, Xi'an University of Technology, Xi'an 710032, China

Corresponding author: Liu, C.-Y. (lcy@nwpu.edu.cn)

Source title: Wuji Cailiao Xuebao/Journal of Inorganic Materials

Abbreviated source title: Wuji Cailiao Xuebao

Volume: 28

Issue: 3

Issue date: March 2013

Publication year: 2013

Pages: 301-306

Language: Chinese

ISSN: 1000324X

CODEN: WCXUET

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: Discontinuous films of ZnO particles were prepared on zinc substrates by air pre-oxidation process. The arrays of rod-like ZnO nano-/micro-crystals on zinc substrates were synthesized through hydrothermal processing with N₂H₄·H₂O solution. It is found that the rod-like ZnO nano-/micro-crystals align well on the substrate surface with a unique crystallographic orientation. The experimental results suggest a free alignment growth mechanism for rod-like ZnO nano-/micro-crystals on zinc substrates. The crystallization habit of ZnO nano-/micro-crystals is to grow along with the c axis fast under hydrothermal conditions, thus the well alignment of rod-like ZnO nano-/micro-crystals only depends on the state of ZnO nuclei on the substrate surface. The states of ZnO nuclei on the substrate surface with a unique crystallographic orientation well agree with others, which regulates the alignment of rod-like ZnO nano-/micro-crystals. In temperature-dependent photoluminescence spectra, the "negative

thermal quenching" phenomenon of near band-gap edge excitons is observed in the temperature ranging from 30 K to 60 K, which identify two non-radiative processes and one negative thermal quenching process.

Number of references: 29

Main heading: Substrates

Controlled terms: Alignment - Crystal orientation - Photoluminescence - Zinc - Zinc oxide

Uncontrolled terms: Alignment growth - Crystallographic orientations - Hydrothermal conditions - Hydrothermal processing - Nonradiative process - Pre-oxidation process - Temperature-dependent photoluminescence - Zinc substrates

Classification code: 933.1.1 Crystal Lattice - 804.2 Inorganic Compounds - 801 Chemistry - 741.1 Light/Optics - 601.1 Mechanical Devices - 546.3 Zinc and Alloys - 461

Bioengineering and Biology

DOI: 10.3724/SP.J.1077.2013.12225

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20131416174574

Title: Design of RCD active gate control circuit for series connected IGBTs

Authors: Ning, Dalong¹; Tong, Xiangqian¹; Li, Xia²; Liu, Ning²; Feng, Wutong²; Li, Yuning²/宁大龙;同向前;李侠;刘宁;冯武彤;李育宁

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

2 Xi'an XD Power Systems Co., Ltd., Xi'an 710016, China

Corresponding author: Ning, D.

Source title: Diangong Jishu Xuebao/Transactions of China Electrotechnical Society

Abbreviated source title: Diangong Jishu Xuebao

Volume: 28

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 192-198

Language: Chinese

ISSN: 10006753

CODEN: DIJXE5

Document type: Journal article (JA)

Publisher: Chinese Machine Press, 1 Nanjie Baiwanzhuang, Beijig, 100037, China

Abstract: The RCD active gate control circuit for series connected IGBTs is researched in order to balance the IGBT's collector-emitter voltage dynamically. The principle of the RCD active gate control circuit and parameters selection guide of the circuit elements is introduced. The function of each element is analyzed with the help of equivalent circuit under different switch states of IGBT, and the design method of RCD active gate control circuit is proposed to meet the voltage balancing requirement. The feasibility of the proposed method is verified by an experimental system, and the results show that voltage balancing is well achieved whether gate signal of IGBTs in a series stack is synchronous or not.

Number of references: 11

Main heading: Electric network analysis

Controlled terms: Electrical engineering - Technology

Uncontrolled terms: Active gate control - Circuit elements - Collector-emitter voltage -

Experimental system - Parameters design - Parameters selection - Series-connected
- Voltage balancing

Classification code: 703.1.1 Electric Network Analysis - 709 Electrical Engineering, General
- 901 Engineering Profession

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20131416161808

Title: Chainlike multi-population multi-agent evolutionary algorithm

Authors: Wu, Ya-Li ; Jin, Xiao-Yi1 ; Liu, Ge1/吴亚丽;靳笑一;刘格

Author affiliation: 1 Automation and Information Engineering School, Xi'an University of
Technology, Xi'an Shaanxi 710048, China

Corresponding author: Wu, Y.-L. (yliwu@xaut.edu.cn)

Source title: Kongzhi Lilun Yu Yingyong/Control Theory and Applications

Abbreviated source title: Kong Zhi Li Lun Yu Ying Yong

Volume: 30

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 37-53

Language: Chinese

ISSN: 10008152

CODEN: KLYYEB

Document type: Journal article (JA)

Publisher: South China University of Technology, Guangzhou, 510640, China

Abstract: We propose a novel chainlike multi-population multi-agent evolutionary algorithm which combines the dynamic neighborhood environment chainlike structure with the evolutionary framework of multi-population. This algorithm provides the evolution structure for multi-populations interaction. Agents in the population increase their own energy by competition, cooperation and self-study with its dynamic neighborhood agents. The chainlike structure improves the efficiency of algorithms and reduces the computational complexity. The interaction of information among various populations in a regular period of time improves the diversity of the population and decreases the possibility of sticking at local optima. Theoretical analysis and simulation of multiple test functions show that the new algorithm is very good for handling high-dimension optimization problems.

Number of references: 11

Main heading: Evolutionary algorithms

Uncontrolled terms: Analysis and simulation - Chainlike structure - Dynamic
neighborhood - Evolution structure - Evolutionary framework - High-dimension
optimization problems - Multi population - Regular periods

Classification code: 723 Computer Software, Data Handling and Applications - 921
Mathematics

DOI: 10.7641/CTA.2013.11238

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131416157386

Title: Spatial variability of soil organic carbon in a typical watershed in the source area of the middle Dan River, China

Authors: Xu, Guo-Ce^{1, 2}; Li, Zhan-Bin^{1, 2, 3}; Li, Peng³; Lu, Ke-Xin³; Wang, Yun⁴/徐国策;李占斌;李鹏;鲁克新;

Author affiliation: 1 State Key Laboratory of Soil Erosion and Dry-land Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources, Yangling, Shaanxi 712100, China

2 Graduate School of Chinese Academy of Sciences, Beijing 100039, China

3 Key Laboratory of Northwest Water Resources and Environment Ecology of Ministry of Education, Xi'an University of Technology, Xi' an, Shaanxi 710048, China

4 College of Resources and Environment, Northwest A and F University, Yangling, Shaanxi 712100, China

Corresponding author: Xu, G.-C. (xuguoce_x@163.com)

Source title: Soil Research

Abbreviated source title: Soil Res.

Volume: 51

Issue: 1

Issue date: 2013

Publication year: 2013

Pages: 41-49

Language: English

ISSN: 1838675X

Document type: Journal article (JA)

Publisher: CSIRO, P.O. Box 1139, Collingwood, VIC 3066, Australia

Abstract: Soil organic carbon (SOC) plays an important role in maintaining and improving soil fertility and quality, in addition to mitigating climate change. Understanding SOC spatial variability is fundamental for describing soil resources and predicting SOC. In this study, SOC content and SOC mass were estimated based on a soil survey of a small watershed in the Dan River, China. The spatial heterogeneity of SOC distribution and the impacts of land-use types, elevation, slope, and aspect on SOC were also assessed. Field sampling was carried out based on a 100m by 100m grid system overlaid on the topographic map of the study area, and samples were collected in three soil layers to a depth of 40cm. In total, 222 sites were sampled and 629 soil samples were collected. The results showed that classical kriging could successfully interpolate SOC content in the watershed. Contents of SOC showed strong spatial heterogeneity based on the values of the coefficient of variation and the nugget ratio, and this was attributed largely to the type of land use. The range of the semi-variograms increased with increasing soil depth. The SOC content in the soil profile decreased as soil depth increased, and there were

significant ($P < 0.01$) differences among the three soil layers. Land use had a great impact on the SOC content. ANOVA indicated that the spatial variation of SOC contents under different land use types was significant ($P < 0.05$). The SOC mass of different land-use types followed the order grassland>forestland>cropland. Mean SOC masses of grassland, forestland, and cropland at a depth of 0-40cm were 5.87, 5.61, and 5.07kgm⁻², respectively. The spatial variation of SOC masses under different land-use types was significant ($P < 0.05$). ANOVA also showed significant ($P < 0.05$) impact of aspect on SOC mass in soil at 0-40cm. Soil bulk density played an important role in the assessment of SOC mass. In conclusion, carbon in soils in the source area of the middle Dan River would increase with conversion from agricultural land to forest or grassland. © 2013 CSIRO.

Number of references: 34

Main heading: Soils

Controlled terms: Analysis of variance (ANOVA) - Climate change - Forestry - Land use - Landforms - Maps - Rivers - Soil surveys - Watersheds

Uncontrolled terms: Agricultural land - Coefficient of variation - Different land use types - Geo-statistics - Soil organic carbon - Spatial heterogeneity - Spatial variability - Spatial variations

Classification code: 902.1 Engineering Graphics - 821.0 Woodlands and Forestry - 483.1 Soils and Soil Mechanics - 922 Statistical Methods - 481.1 Geology - 444.1 Surface Water - 403 Urban and Regional Planning and Development - 451 Air Pollution

DOI: 10.1071/SR12327

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20131416171522

Title: Fabrication of SiCp/Cu-Al electronic packaging material by pressureless infiltration method

Authors: Yang, L.1 ; Zhang, M.1/杨亮;张敏

Author affiliation: 1 College of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yang, L. (yangliang20070126@163.com)

Source title: Materials Science and Technology (United Kingdom)

Abbreviated source title: Mater. Sci. Technol.

Volume: 29

Issue: 3

Issue date: March 2013

Publication year: 2013

Pages: 326-331

Language: English

ISSN: 02670836

E-ISSN: 17432847

CODEN: MSCTEP

Document type: Journal article (JA)

Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United

Kingdom

Abstract: The SiCp/Cu-Al composites with 72.7 vol.-%SiC particles were prepared by pressureless infiltration, and Cu coated SiC particles (SiC/Cu composite powder) were used as reinforcements for aluminium matrix. The effects of moulding pressure, infiltration temperature and infiltration time on the infiltration depth were studied by orthogonal test. The morphology and phase structure of the composites were analysed by scanning electron microscopy and X-ray diffraction. The results show that under moulding pressure of 10 MPa, infiltration temperature of 850°C and infiltration time of 3 h conditions, the SiCp/Cu-Al composite structure is uniform and dense without obvious porosity defects, and the thermal expansion coefficient is close to thermal expansion coefficient of the Turner model. © 2013 Institute of Materials, Minerals and Mining.

Number of references: 9

Main heading: Silicon carbide

Controlled terms: Aluminum - Aluminum coatings - Electronics packaging - Molding - Packaging materials - Scanning electron microscopy - X ray diffraction

Uncontrolled terms: Electronic packaging material - Infiltration temperatures - Infiltration time - Moulding pressure - Pressureless infiltration - Pressureless infiltration method - SiC/Cu composites - Thermal expansion coefficients

Classification code: 813.2 Coating Materials - 804.2 Inorganic Compounds - 741.1 Light/Optics - 716 Telecommunication; Radar, Radio and Television - 931.3 Atomic and Molecular Physics - 715 Electronic Equipment, General Purpose and Industrial - 694.2 Packaging Materials - 541.1 Aluminum - 535.2 Metal Forming - 714 Electronic Components and Tubes

DOI: 10.1179/1743284712Y.0000000152

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20131416175224

Title: Spatiotemporal laws of post-construction settlement of loess-filled foundation of Lüliang Airport

Authors: Zhu, Cai-Hui¹ ; Li, Ning¹ ; Liu, Ming-Zhen² ; Wei, Yi-Feng³/朱才辉;李宁;刘明振;魏弋峰

Author affiliation: 1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

2 College of Civil Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China

3 China Airport construction Group Corporation of CAAC, Beijing 100101, China

Corresponding author: Zhu, C.-H. (zhucaihui123@163.com)

Source title: Yantu Gongcheng Xuebao/Chinese Journal of Geotechnical Engineering

Abbreviated source title: Yantu Gongcheng Xuebao

Volume: 35

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 293-301

Language: Chinese

ISSN: 10004548

CODEN: YGXUEB

Document type: Journal article (JA)

Publisher: Chinese Society of Civil Engineering, 34 Hujuguan, Nanjing, 210024, China

Abstract: Based on the monitoring results of the post-construction settlement of the loess-filled embankment foundation of Lu¨liang Airport, the components of the post-construction settlement of the high fill and the original foundation and the causes of uneven settlement are analyzed. The influence factors such as the height of fill, filling rate, general compaction degree and time on the post-construction settlement are quantitatively analyzed. The recursive analysis method based on the strain rate is proposed to predict the post-construction settlement. The results show that the decrease of the filling rate, appropriate increase of foundation compaction degree and decrease of filling height are the effective measures to reduce the post-construction settlement. The recursive analysis can more approximately describe the effect of construction technology on post-construction settlement.

Number of references: 14

Main heading: Settlement of structures

Controlled terms: Airports - Compaction - Filling - Foundations - Sediments

Uncontrolled terms: Construction technologies - Effective measures - Embankment foundation - Monitoring results - Post-construction settlement - Recursive analysis - Settlement monitoring - Spatiotemporal law

Classification code: 402 Buildings and Towers - 405 Construction Equipment and Methods; Surveying - 431.4 Airports - 483 Soil Mechanics and Foundations - 536.1 Powder Metallurgy Operations - 691.2 Materials Handling Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20131416175212

Title: Mesoscopic deformation mechanism of loess high-fill foundation based on soil electrical resistivity

Authors: Zhu, Caihui¹; Li, Ning¹/朱才辉;李宁

Author affiliation: ¹ Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

Corresponding author: Zhu, C. (zhucaihui123@163.com)

Source title: Yanshilixue Yu Gongcheng Xuebao/Chinese Journal of Rock Mechanics and Engineering

Abbreviated source title: Yanshilixue Yu Gongcheng Xuebao

Volume: 32

Issue: 3

Issue date: March 2013

Publication year: 2013

Pages: 640-648

Language: Chinese

ISSN: 10006915

CODEN: YLGXF5

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: In order to reveal the mesoscopic deformation mechanism of loess high-fill foundation of Luliang airport, the soil electrical resistivity-consolidation combination measuring instrument are developed based on the principle of soil electrical resistivity. The dynamic variation law of the electrical resistivity of Q3 loess are obtained through in-situ monitoring, field sampling and laboratory test under different initial saturations and constant load. The electrical resistivity-strain curve model of Q3 loess to the limits of optimum moisture content is proposed; and its moisture migration and structural changing characteristics under constant load are also obtained. The study results show that the post-construction deformation of the loess high-fill foundation top surface is composed of the consolidation deformation of initial foundation and the fill bellow the surface to a certain depth and the long-term creep deformation of deep overconsolidated soil. The mesoscopic deformation mechanism of soil is revealed initially; and the study provides scientific basis for the establishment of loess high-fill soil constitutive model and reasonable selection of the numerical analysis model.

Number of references: 20

Main heading: Geologic models

Controlled terms: Creep - Electric conductivity - Foundations - Hydraulic conductivity - Sediments - Soil mechanics - Soils - Superconducting materials

Uncontrolled terms: Creep deformations - Deformation mechanism - Initial saturation - Numerical analysis models - Optimum moisture content - Overconsolidated soils - Soil constitutive model - Soil electrical resistivities

Classification code: 951 Materials Science - 708.3 Superconducting Materials - 701.1

Electricity: Basic Concepts and Phenomena - 632.1 Hydraulics - 483.1 Soils and Soil Mechanics - 483 Soil Mechanics and Foundations - 481.1 Geology - 421 Strength of Building Materials; Mechanical Properties - 405 Construction Equipment and Methods; Surveying

Database: Compendex

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20130419 新增 15 条

1.

Accession number: 20131516189206

Title: Fabrication and properties of Cu/MgB₂ composites by vacuum sintering

Authors: Yang, Qing^{1, 2}; Zou, Juntao^{1, 2}; Liu, Zhao¹; Yu, Xiaojiang¹/杨卿;邹军涛;;余晓皎

Author affiliation: 1 Xi'an University of Technology, 5 South Jinhua Road, Xi'an 710048, China
2 Shaanxi Province Key Laboratory for Electrical Materials and Infiltration Technology, Xi'an University of Technology, 5 South Jinhua Road, Xi'an 710048, China

Corresponding author: Yang, Q. (yangqing@xaut.edu.cn)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 141-144

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Cu/MgB₂ composites with different content of MgB₂ (10, 20, 30 vol.%) were fabricated by vacuum sintering of copper and MgB₂ powders. The effects of MgB₂ content and sintering process on the properties of Cu/MgB₂ composites including the microstructures, relative density, electrical conductivity and hardness were then investigated. The results showed that the distribution uniformity of MgB₂ on copper matrix decreased obviously with the increase of MgB₂ content, the hardness of Cu/MgB₂ composites increased and the relative density decreased slightly though the electrical conductivity decreased greatly. The relative density and hardness of Cu/MgB₂ composites increased after the repressing-resintering process, the electrical conductivity was also improved slightly. © (2013) Trans Tech Publications, Switzerland.

Number of references: 10

Main heading: Sintering

Controlled terms: Computer simulation - Electric conductivity - Hardness - Metallic matrix composites - Resins - Vacuum

Uncontrolled terms: Copper matrix - Distribution uniformity - Electrical conductivity - Property - Relative density - Repressing-resintering - Sintering process - Vacuum sintering

Classification code: 815.1.1 Organic Polymers - 723.5 Computer Applications - 701.1

Electricity: Basic Concepts and Phenomena - 951 Materials Science - 633 Vacuum

Technology - 531 Metallurgy and Metallography - 421 Strength of Building Materials;

Mechanical Properties - 536.1 Powder Metallurgy Operations

DOI: 10.4028/www.scientific.net/MSF.749.141

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131516198434

Title: Experimental research on photovoltaic module for asymmetrical compound parabolic concentrator

Authors: Jinshe, Yuan¹ ; Mingyue, Wang¹ ; Changmin, Yang²;;;

Author affiliation: 1 Department of Physics, Chongqing Normal University, Chongqing 400047,

China

2 Department of Applied Physics, Xian University of Technology, Shaanxi, Xian 710048, China

Corresponding author: Jinshe, Y. (yuanjesse@yahoo.com.cn)

Source title: ISES Solar World Congress 2007, ISES 2007

Abbreviated source title: ISES Sol. World Congr., ISES

Volume: 3

Monograph title: ISES Solar World Congress 2007, ISES 2007

Issue date: 2007

Publication year: 2007

Pages: 1561-1563

Language: English

ISBN-13: 9781622765447

Document type: Conference article (CA)

Conference name: International Solar Energy Society Solar World Congress 2007, ISES 2007

Conference date: September 18, 2007 - September 21, 2007

Conference location: Beijing, China

Conference code: 96356

Publisher: International Solar Energy Society, Villa Tannheim, Wiesentalstrasse 50, D-79115, Germany

Abstract: The photovoltaic module for the use of fixed asymmetrical CPC concentrator was designed and fabricated based on the performance of polycrystalline-silicon solar cells with back surface field (BSF) structure. The performance of the combination of the module and asymmetrical CPC concentrator was investigated. The results show its effective concentration ratio to be 2.46 and the output power of the PV-a-CPC system to be increased by 2.13 times compared with that of the module approximately. Copyright © (2007) by the International Solar Energy Society.

Number of references: 4

Main heading: Concentration (process)

Uncontrolled terms: Back surface fields - Compound parabolic concentrator - Effective concentration - Experimental research - Output power - Photovoltaic modules

Classification code: 802.3 Chemical Operations

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131516195831

Title: Robust ellipse fitting based on sparse combination of data points

Authors: Liang, Junli1 ; Zhang, Miaohua1 ; Liu, Ding1 ; Zeng, Xianju2 ; Ojowu, Ode3 ; Zhao, Kexin3 ; Li, Zhan4 ; Liu, Han1/梁军利;张妙花;刘丁;曾宪聚

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shenzhen University, Shenzhen 518060, China

3 University of Florida, Gainesville, FL 32611, United States

4 NorthWest University, Xi'an 710069, China

Corresponding author: Liang, J. (liangjunli@xaut.edu.cn)

Source title: IEEE Transactions on Image Processing

Abbreviated source title: IEEE Trans Image Process

Volume: 22

Issue: 6

Issue date: 2013

Publication year: 2013

Pages: 2207-2218

Article number: 6459596

Language: English

ISSN: 10577149

CODEN: IIPRE4

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: Ellipse fitting is widely applied in the fields of computer vision and automatic industry control, in which the procedure of ellipse fitting often follows the preprocessing step of edge detection in the original image. Therefore, the ellipse fitting method also depends on the accuracy of edge detection besides their own performance, especially due to the introduced outliers and edge point errors from edge detection which will cause severe performance degradation. In this paper, we develop a robust ellipse fitting method to alleviate the influence of outliers. The proposed algorithm solves ellipse parameters by linearly combining a subset of ('more accurate') data points (formed from edge points) rather than all data points (which contain possible outliers). In addition, considering that squaring the fitting residuals can magnify the contributions of these extreme data points, our algorithm replaces it with the absolute residuals to reduce this influence. Moreover, the norm of data point errors is bounded, and the worst case performance optimization is formed to be robust against data point errors. The resulting mixed ℓ_1/ℓ_2 optimization problem is further derived as a second-order cone programming one and solved by the computationally efficient interior-point methods. Note that the fitting approach developed in this paper specifically deals with the overdetermined system, whereas the current sparse representation theory is only applied to underdetermined systems. Therefore, the proposed algorithm can be looked upon as an extended application and development of the sparse representation theory. Some simulated and experimental examples are presented to illustrate the effectiveness of the proposed ellipse fitting approach. ©

1992-2012 IEEE.

Number of references: 28

Main heading: Statistics

Controlled terms: Algorithms - Biometrics - Edge detection - Errors - Optimization

Uncontrolled terms: Diameter control - Edge point - Ellipse fitting - Iris recognition - Least squares - Minimax criterion - outliers - Overdetermined systems - Silicon single crystals - Sparse representation

Classification code: 922.2 Mathematical Statistics - 921.5 Optimization Techniques - 921 Mathematics - 732 Control Devices - 723 Computer Software, Data Handling and Applications - 716 Telecommunication; Radar, Radio and Television - 461 Bioengineering

and Biology

DOI: 10.1109/TIP.2013.2246518

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131516189235

Title: W-Ti alloy prepared by hydrogen reduction of nanometer WO₃-TiH₂ powders

Authors: Xiao, Peng¹; Qu, Yingchun¹; Yang, Xiaohong¹; Liang, Shuhua¹/肖鹏;;杨晓红;梁淑华

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xiao, P. (xiaopeng01@xaut.edu.cn)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 316-321

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ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: In this study, TiH₂ and WO₃ powders were co-milled together, then the ultrafine powders were reduced at H₂ atmosphere, and W-Ti alloys were prepared by the solid phase sintering. The main purpose of WO₃ powder instead of the W powder was to use the transition of the lattice type of WO₃, and the lattice distortion and defects in the lattice of W would promote Ti atom diffusing into W. It was easy to form a W-rich solid solution and reduce the effect of Ti-rich phase. The results showed that when the milling time of WO₃-TiH₂ was 24h, the particle size of mixed powder reached nanoscale, and WO₃ particles were coated on the surface of TiH₂ particles. The particle size changed unobviously with the increase of the milling time. The XRD analysis showed that the milled WO₃ and TiH₂ were not decomposed in the milling process. When WO₃-TiH₂ milled powders were decomposed in the H₂ atmosphere at 800°C, WO₃ reduction was not sufficient, and the middle phase of WO₂ was existed. When the reduction temperature was 850°C for 2h, WO₃ was reduced to W, and the phase of WO₂ was disappeared. A small amount of TiO₂ was formed by the decomposed Ti and decomposed O from WO₃. W-10Ti alloys were prepared by the solid-phase sintering with the reduced powders at 850°C. It was found that the amount of W-rich solid solution in W-10Ti alloy was decreased, because the

diffusion of Ti to W was inhibited by a small amount of TiO₂ in grainboundaries during the sintering process. © (2013) Trans Tech Publications, Switzerland.

Number of references: 12

Main heading: Titanium alloys

Controlled terms: Computer simulation - Hydrogen - Milling (machining) - Particle size - Powders - Sintering - Solid solutions - Titanium dioxide

Uncontrolled terms: Hydrogen-reduction - Lattice distortions - Milled powders - Milling process - Reduction temperatures - Sintering process - Solid phase sintering - Solid-phase

Classification code: 933 Solid State Physics - 804.2 Inorganic Compounds - 804 Chemical Products Generally - 943.2 Mechanical Variables Measurements - 723.5 Computer Applications - 542.3 Titanium and Alloys - 536.1 Powder Metallurgy Operations - 604.2 Machining Operations

DOI: 10.4028/www.scientific.net/MSF.749.316

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131516199920

Title: Microstructure and properties of Cu/V_{0.97}W_{0.03}O₂ composite material

Authors: Zou, Jun-Tao¹; Zhang, Le¹; Wang, Xian-Hui¹; Huang, Xing¹; Liang, Shu-Hua¹/邹军涛; 张乐;王献辉;黄星;梁淑华

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Wang, X.-H. (xhwang693@xaut.edu.cn)

Source title: Fenmo Yejin Cailiao Kexue yu Gongcheng/Materials Science and Engineering of Powder Metallurgy

Abbreviated source title: Fenmo Yejin Cailiao Kexue yu Gongcheng

Volume: 18

Issue: 1

Issue date: February 2013

Publication year: 2013

Pages: 53-58

Language: Chinese

ISSN: 16730224

Document type: Journal article (JA)

Publisher: Central South University, Lushan Nanlu, Changsha, 410043, China

Abstract: Cu/V_{0.97}W_{0.03}O₂ composite materials were prepared by powder metallurgy. The composition and surface microstructure were analyzed by SEM and EDS, the crystals structure in room temperature was detected by XRD, the conductivity of different V_{0.97}W_{0.03}O₂ doping rates composite during changing temperature was tested by Eddy current electric conductance meter. The results indicate that Cu/V_{0.97}W_{0.03}O₂ composite materials exhibit an abrupt change of conductivity when the temperature is near 0°C, the range of change increases with increasing the amount of V_{0.97}W_{0.03}O₂. Meanwhile, the crystal structure of V_{0.97}W_{0.03}O₂ in Cu/V_{0.97}W_{0.03}O₂ composite materials is the same as tetragon phase VO₂, which indicates that

there is no interaction on crystal structure between Cu and V_{0.97}W_{0.03}O₂, however, a small amount of V_{0.97}W_{0.03}O₂ decomposes in the sintering process.

Number of references: 14

Main heading: Composite materials

Controlled terms: Crystal microstructure - Doping (additives) - Eddy current testing - Phase transitions - Powder metallurgy - Sintering

Uncontrolled terms: Changing temperature - Microstructure and properties - Room temperature - Sintering process - Surface microstructures - VO₂ - XRD

Classification code: 951 Materials Science - 933.1.1 Crystal Lattice - 811 Cellulose, Paper and Wood Products - 801.4 Physical Chemistry - 801 Chemistry - 701.1 Electricity:

Basic Concepts and Phenomena - 536.1 Powder Metallurgy Operations - 536 Powder Metallurgy - 415 Metals, Plastics, Wood and Other Structural Materials

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131516189229

Title: Effect of heat treatment on microstructure and properties of Cu-3Ti-1Al alloy

Authors: Wang, Xianhui¹; Sun, Xiaochun¹; Yang, Xiaohong¹; Liang, Shuhua¹/王献辉;;杨晓红;梁淑华

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China

Corresponding author: Wang, X. (xhwang693@xaut.edu.cn)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 282-286

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CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The effect of heat treatment on the microstructure and properties of Cu-3Ti-1Al alloy was investigated. The microstructure was characterized by scanning electron microscope (SEM) and transmission electron microscope (TEM), and the hardness and electrical conductivity were tested as well. The results showed that the hardness and electrical conductivity of Cu-3Ti-1Al alloy

increased significantly after solid solution and ageing treatment. The strengthening effect of Cu-3Ti-1Al alloy was attributed to the formation of intermetallic phase such as Ti₃Al and fine precipitates of coherent β' -Cu₄Ti. With increase of the aging time and the temperature, the precipitates became coarse and incoherent with Cu matrix, and the discontinuous precipitate β started to grow from grain boundaries toward grain interior, which decreased hardness. As the formation of Ti₃Al, β -Cu₃Ti and β' -Cu₄Ti phase can efficiently reduce Ti concentration in Cu matrix. The electrical conductivity of Cu-3Ti-1Al alloy increases. In the range of experiments, the optimal heat treatment process for Cu-3Ti-1Al alloy is solid solution at 850°C for 4h and ageing 500°C for 2h, and the hardness and electrical conductivity are 227HV and 12.3% IACS, respectively. © (2013) Trans Tech Publications, Switzerland.

Number of references: 17

Main heading: Titanium alloys

Controlled terms: Alloys - Aluminum - Cerium alloys - Computer simulation - Electric conductivity - Hardness - Heat treatment - Microstructure - Precipitates - Scanning electron microscopy - Solid solutions

Uncontrolled terms: Ageing - Discontinuous precipitates - Effect of heat treatments - Electrical conductivity - Heat treatment process - Intermetallic phase - Microstructure and properties - Strengthening effect

Classification code: 933 Solid State Physics - 804 Chemical Products Generally - 741.1 Light/Optics - 723.5 Computer Applications - 701.1 Electricity: Basic Concepts and Phenomena - 951 Materials Science - 547.2 Rare Earth Metals - 541.1 Aluminum - 537.1 Heat Treatment Processes - 531.1 Metallurgy - 421 Strength of Building Materials; Mechanical Properties - 542.3 Titanium and Alloys

DOI: 10.4028/www.scientific.net/MSF.749.282

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20131516191859

Title: VLSI design of configurable integer pixel motion estimation with a reservoir architecture

Authors: Lu, Wei¹; Yu, Ningmei¹; Qu, Boqiang¹; Ren, Ru¹/路伟;余宁梅;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yu, N. (yunm@xaut.edu.cn)

Source title: Journal of Computational Information Systems

Abbreviated source title: J. Comput. Inf. Syst.

Volume: 9

Issue: 4

Issue date: February 15, 2013

Publication year: 2013

Pages: 1315-1322

Language: English

ISSN: 15539105

Document type: Journal article (JA)

Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States

Abstract: A scalable VLSI architecture for Variable Block Size Motion Estimation (VBSME) in H.264/AVC based on a full-search motion estimation algorithm is proposed in this paper. Through rational design for the data flow and processing module array, the memory traffic is reduced; data reusability in vertical direction is improved. Furthermore, the number of processing element is configured according to the area-speed requirement, data reusability in horizontal direction is controlled, and fast matching in large searching window is realized. After logic synthesis using SMIC 0.13 μ m standard cell library, the search window size is 32 \times 32, the number of gates is 338K (3PEs) in two-input equivalent NAND gates and the maximum operating clock frequency is 300 MHz (1920 \times 1088@70fps). Copyright © 2013 Binary Information Press.

Number of references: 12

Main heading: Motion estimation

Controlled terms: Motion Picture Experts Group standards - Reusability

Uncontrolled terms: Integer pixel - Motion estimation algorithm - Processing elements
- Processing modules - Reservoir architecture - Variable block-size motion estimation -
Vertical direction - VLSI

Classification code: 452.3 Industrial Wastes - 716.1 Information Theory and Signal

Processing - 723.2 Data Processing and Image Processing

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20131516199990

Title: Differential space time code for free space optical multiple input multiple output system

Authors: Chen, Juan¹ ; Ke, Xizheng¹ ; Cheng, Ting¹/陈娟;柯熙政;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

Corresponding author: Chen, J. (juan0110@126.com)

Source title: Guangxue Xuebao/Acta Optica Sinica

Abbreviated source title: Guangxue Xuebao

Volume: 33

Issue: 2

Issue date: February 2013

Publication year: 2013

Article number: 0206004

Language: Chinese

ISSN: 02532239

CODEN: GUXUDC

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: Laser is always affected by atmospheric turbulence in atmosphere transmission, and channel estimation will become more difficult at poor atmospheric condition. According to Chadi Abou-Rjeily's coding idea, introducing permutation matrix instead of negative form of symbols in the real area Alamouti method, utilizing binary pulse position modulation, a differential space-time code scheme that does not require channel estimates for free space optical communication is proposed. The simulation results show that, compared with Alamouti coding

which requires channel estimates, this method can obtain the same diversity gain. At the same time, it is relatively simple and more feasible in practice.

Number of references: 18

Main heading: Channel coding

Controlled terms: Atmospheric turbulence - MIMO systems - Modulation - Optical communication - Pulse position modulation

Uncontrolled terms: Alamouti coding - Atmospheric conditions - Binary pulse position modulation - Channel estimate - Differential space-time codes - Free Space Optical communication - Free-space optical - Permutation matrix

Classification code: 443.1 Atmospheric Properties - 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 717.1 Optical Communication Systems - 961 Systems Science

DOI: 10.3788/AOS201333.0206004

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131516189190

Title: Preparation of tungsten-copper composite powder by electroless plating

Authors: Wang, Ying¹; Zou, Juntao¹; Zhang, Qinghe¹; 邹军涛;

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Shaanxi Province, Xi'an 710048, China

Corresponding author: Wang, Y. (Ying.gongzuo@163.com)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 28-34

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: In this paper, tungsten-copper composite powder was prepared on the particle size of 6 ~ 10 μ m tungsten powder surface by electroless copper plating. The orthogonal experimental results show that the primary and secondary order of factors affecting the deposition rate following the sequence: copper sulfate solution concentration > pH value > solution

temperature > formaldehyde concentration > complexing agent concentration. The process of the electroless copper plating on the tungsten powder surface was investigated, and the best electroless copper plating solution composition and operation conditions were obtained as follows: plating temperature 323 K, stirring speed 30 r/min, PH =13, loadage 8g/L, CuSO₄•5H₂O 0.032 mol/L, HCHO 0.274 mol/L, TEA 0.1208 mol/L, 2, 2'-bipyridine 12 mg/L. © (2013) Trans Tech Publications, Switzerland.

Number of references: 10

Main heading: Tungsten compounds

Controlled terms: Computer simulation - Copper plating - Deposition - Deposition rates - Electroless plating - Tungsten alloys

Uncontrolled terms: Complexing agents - Electroless copper plating - Formaldehyde concentrations - Operation conditions - Orthogonal experimental - Solution temperature - Tungsten powders - Tungsten-copper composites

Classification code: 539.3 Metal Plating - 539.3.2 Electroless Plating - 543.5 Tungsten and Alloys - 617 Turbines and Steam Turbines - 723.5 Computer Applications - 804.1 Organic Compounds

DOI: 10.4028/www.scientific.net/MSF.749.28

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20131516191972

Title: Study of artificial structural loess under the true triaxial tests

Authors: Chen, Chang-Lu¹; Juan, Fang¹; Luo, Ai-Zhong¹; Shao, Sheng-Jun²/陈昌禄;;邵生俊

Author affiliation: 1 Bijie University, Bijie Guizhou 551700, China

2 Xi'an University of Technology, Xi'an Shaanxi 710048, China

Corresponding author: Chen, C.-L. (chenclu@qq.com)

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 671-674

Monograph title: Construction and Urban Planning

Issue date: 2013

Publication year: 2013

Pages: 343-348

Language: English

ISSN: 10226680

ISBN-13: 9783037856611

Document type: Conference article (CA)

Conference name: 2013 International Conference on Structures and Building Materials, ICSBM 2013

Conference date: March 9, 2013 - March 10, 2013

Conference location: Guizhou, China

Conference code: 96430

Publisher: Trans Tech Publications, P.O. Box 1254, Clausthal-Zellerfeld, D-38670, Germany

Abstract: Structure characteristic is the essential property of natural soils. The paper developed

an indoor method of artificial structural loess, and studied on the true triaxial tests of artificial structural loess on the base of improving the original true triaxial apparatus. The results show that it is reasonably reliable of this artificial method. At the same time, the variation of failure strength and residual strength of structural loess under complex stress conditions was analysed. When the confining pressure was less than the structural strength of the structural loess, the stress-strain curve was soften, on the contrary the stress-strain curve was harden. In the end the paper analyzed that Mohr-Coulomb strength criterion was accurately to describe the residual strength variation of structural loess but there has much error in describing the peak broken strength, the value was obviously small. © (2013) Trans Tech Publications, Switzerland.

Number of references: 16

Main heading: Sediments

Controlled terms: Soil testing - Stress-strain curves - Urban planning

Uncontrolled terms: Artificial preparation - Complex stress condition - Mohr-Coulomb strength criterion - Strength variation - Structural loess - Structure characteristic - True triaxial apparatus - True triaxial tests

Classification code: 403.1 Urban Planning and Development - 421 Strength of Building Materials; Mechanical Properties - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMR.671-674.343

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: IP52521846

Article in Press

Title: Preferential water and solute transport through sandy soil containing artificial macropores

Authors: Zhou, B.B.1, 2 ; Li, Y.2 ; Wang, Q.J.1, 2 ; Jiang, Y.L.1 ; Li, S.2/;;王全九;;

Author affiliation: 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and, Northwest A and F University, Yangling, 712100, China

Corresponding author: Wang, Q.J. (wquanjiu@163.com)

Source title: Environmental Earth Sciences

Abbreviated source title: Environ. Earth Sci.

Issue date: 2013

Publication year: 2013

Pages: 1-9

Language: English

ISSN: 18666280

E-ISSN: 18666299

Document type: Article in Press

Abstract: Macropores resulting from soil pedogenesis and biological activity play important roles in soil water and chemical transport. Numerous studies have examined individual macropores and the effects of their size on solute transport, but few have assessed the effects of

macropore continuity and of neighboring macropores. This paper describes a laboratory investigation of the effects of macropores, with varying degrees and types of continuity, on the transport and distribution of solutes in a sandy soil from the northern Loess Plateau, China. Breakthrough curves were obtained from 60 cm tall, 2-D columns containing standardized artificial macropores using an input solution of 1,190 mg/L KBr and 100 mg/L FD&C Blue #1 under a constant hydraulic head of 8 cm. The types of macropore were: open at both the surface and bottom of the soil column (O-O); open at the surface, closed at the bottom (O-C); and closed at the surface, open at the bottom (C-O). Columns with no macropores served as a control. In the O-O columns the solution reached the bottom 10-50 times faster than in any other treatment, bypassing most of the soil matrix. The presence of an O-C macropore resulted in weak retardation and much deeper penetration of the bromide and FD&C Blue #1 solution than in the control columns. However, the C-O macropore had little effect on either breakthrough curves or solute distributions. In further experiments that considered neighboring macropores effects, an inclined macropore strongly affected solute concentrations in the profile around a nearby vertical macropore. It was concluded that the length, type and position of single macropores, and the presence of neighboring macropores, all affect soil water flow and solute infiltration parameters in a sandy loam soil. © 2013 Springer-Verlag Berlin Heidelberg.

Number of references: 25

Main heading: Solute transport

Controlled terms: Bioactivity - Finite difference method - Sand - Soil moisture

Uncontrolled terms: Break through curve - Chemical transport - Distribution of solute
- Infiltration parameters - Laboratory investigations - Soil water flows - Solute concentrations - Solute distribution

Classification code: 461.6 Medicine and Pharmacology - 483.1 Soils and Soil Mechanics - 921.6 Numerical Methods

DOI: 10.1007/s12665-013-2339-6

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20131516189211

Title: Study on the interface diffusion bonding of the copper alloy/30CrMnSi steel

Authors: Zou, Juntao¹; Liu, Yanfeng²; Pei, Lu¹; Wang, Xianhui¹; Liang, Shuhua¹/邹军涛;刘艳峰;;王献辉;梁淑华

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Department of Chemistry and Chemical Engineering, Shangluo University, Shangluo 726000, China

Corresponding author: Zou, J. (zoujt077@163.com)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 168-172

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The copper alloy/30CrMnSi steel bi-metal composite materials were prepared by the interface diffusion bonding method. The diffusion of elements close to the bonding interface was studied and the formation and growth mechanism of dissolution layer were discussed as well. The results showed that a diffusion transition layer could be formed with the different widths for copper alloy/30CrMnSi steel integrated material. A diffusion transition layer was formed close to 30CrMnSi steel side due to the inter-diffusion of the alloy elements. The microstructure characterization showed that no harmful brittle phase presented around the interface, and two heterogeneous materials had a good metallurgical bonding. © (2013) Trans Tech Publications, Switzerland.

Number of references: 14

Main heading: Interfaces (materials)

Controlled terms: Alloy steel - Characterization - Computer simulation - Copper - Copper alloys - Diffusion - Diffusion bonding

Uncontrolled terms: 30CrMnSi steels - Diffusion transition - Heterogeneous materials - Integrated materials - Interface diffusion - Metallurgical bonding - Microstructure characterization - Transition layers

Classification code: 951 Materials Science - 931.1 Mechanics - 812.1 Ceramics - 723.5 Computer Applications - 545.3 Steel - 544.2 Copper Alloys - 544.1 Copper

DOI: 10.4028/www.scientific.net/MSF.749.168

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20131516189236

Title: Investigation on the preparation and properties of mocu gradientmaterial

Authors: Yang, Xiaohong¹ ; Zhang, Nina¹ ; Xiao, Peng¹ ; You, Caiyin¹/杨晓红;张妮娜;肖鹏;游才印

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yang, X. (yangxh@xaut.edu.cn)

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 749

Monograph title: Materials Performance, Modeling and Simulation

Issue date: 2013

Publication year: 2013

Pages: 322-327

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037856093

Document type: Conference article (CA)

Conference name: Chinese Materials Congress 2012, CMC 2012

Conference date: July 13, 2012 - July 18, 2012

Conference location: Taiyuan, China

Conference code: 96431

Sponsor: 667

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: In this study, MoCu gradient materials were prepared by the combination methods of liquidphase sintering and permeability copper. The effect of pressure and sintering temperature on the properties of MoCu gradient materials was studied. The physical and mechanical properties of MoCu20/MoCu40 and MoCu20/MoCu30/MoCu40 gradient materials were tested respectively. The results showed that the relative density of green compact and sintered gradient materials increased with the increase of pressing force from 10 tons to 30 tons. The electrical conductivity and hardness of sintered compact achieved the maximum value by the 20 tons. Within the sintering temperature range of 1100°C to 1400°C, the relative density, electrical conductivity and hardness of sintered gradient materials increased with the increase of sintering temperature. The overall properties of sintered materials were obtained at 1350°C. For two-layer and three-layer MoCu gradient materials, their microstructures and chemical compositions showed a continuously and gradient change. The bending strength and the thermal conductivity of three-layer MoCu gradient materials were better than that of two-layer gradient materials. © (2013) Trans Tech Publications, Switzerland.

Number of references: 11

Main heading: Sintering

Controlled terms: Computer simulation - Electric conductivity - Hardness - Materials - Thermal conductivity

Uncontrolled terms: Chemical compositions - Combination method - Electrical conductivity - Gradient materials - Overall properties - Physical and mechanical properties - Preparation and properties - Sintering temperatures

Classification code: 536.1 Powder Metallurgy Operations - 641.2 Heat Transfer - 701.1

Electricity: Basic Concepts and Phenomena - 723.5 Computer Applications - 951 Materials Science

DOI: 10.4028/www.scientific.net/MSF.749.322

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20131516182694

Title: Superplastic behavior of reciprocating extruded Mg-6Zn-1Y-0.6Ce-0.6Zr from rapidly solidified ribbons

Authors: Guo, Xuefeng¹ ; Yang, Wenpeng^{1, 2} ; Ren, Fang³/郭学峰;杨文鹏;

Author affiliation: 1 School of Materials Science and Engineering, Henan Polytechnic University, Jiaozuo 454000, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

3 School of Economics and Management, Henan Polytechnic University, Jiaozuo 454000, China

Corresponding author: Guo, X. (guoxuef@gmail.com)

Source title: Journal Wuhan University of Technology, Materials Science Edition

Abbreviated source title: J Wuhan Univ Technol Mater Sci Ed

Volume: 27

Issue: 6

Issue date: December 2012

Publication year: 2012

Pages: 1033-1037

Language: English

ISSN: 10002413

CODEN: JWUTE8

Document type: Journal article (JA)

Publisher: Wuhan Ligong Daxue, 122, Luoshi Road Wuhan Hubei, 430070, China

Abstract: RRE-Mg66 alloy with a composition of Mg-6.0%Zn-1.0%Y-0.6%Ce-0.6Zr was prepared by combinatorial processes of rapid solidification, reciprocating extrusion and extrusion.

Microstructure was evaluated on SEM and TEM. The average grain size of the alloy is 0.7 μm , the size of the second phase at grain boundary is 0.15 μm , and the size of the intragranular precipitates in round shape is less than 20 nm. Superplastic behavior of the material was investigated in a temperature range of 150 to 250 C and initial strain rate range of 3.3×10^{-4} to $3.3 \times 10^{-2} \text{ s}^{-1}$ in air. The highest elongation of 270% was obtained at 250 C and $3.3 \times 10^{-3} \text{ s}^{-1}$.

High-strain-rate superplasticity and low-temperature superplasticity were achieved. The superplasticity results from intragranular sliding (IGS) at temperatures from 170 to < 200 C and grain boundaries sliding (GBS) at 250 C. At 200 C a combination of IGS and GBS contributes to the superplastic flow. © 2012 Wuhan University of Technology and Springer-Verlag Berlin Heidelberg.

Number of references: 18

Main heading: Rapid solidification

Controlled terms: Extrusion - Grain boundaries - Strain rate - Superplasticity - Zinc - Zirconium

Uncontrolled terms: Average grain size - Grain boundaries sliding - High-strain-rate superplasticity - Intragranular precipitates - Low temperature superplasticity - Rapidly solidified - Reciprocating extrusion - Superplastic behavior

Classification code: 933.1 Crystalline Solids - 933 Solid State Physics - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 546.3 Zinc and Alloys - 535.2.2 Metal Forming Practice - 531.2 Metallography - 531 Metallurgy and Metallography - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1007/s11595-012-0595-z

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20131516200094

Title: Effect of rainfall on wireless laser communication

Authors: Zhu, Yaolin^{1, 2}; An, Ran²; Ke, Xizheng¹/朱耀麟;安然;柯熙政

Author affiliation: 1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 Electronic Information College, Xi'an Polytechnic University, Xi'an, Shaanxi 710048, China

Corresponding author: An, R. (anmaoran@163.com)

Source title: Guangxue Xuebao/Acta Optica Sinica

Abbreviated source title: Guangxue Xuebao

Volume: 32

Issue: 12

Issue date: December 2012

Publication year: 2012

Article number: 1206003

Language: Chinese

ISSN: 02532239

CODEN: GUXUDC

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: In the experiments of laser signal transport in rain medium, it is obvious that the transmission in heavy rain is bigger than that in light rain. This shows that the attenuation of light signal in light rain is bigger than that in heavy rain. The transmission attenuation of wireless laser communication in rain is noticeable. According to the theory of Mie and Weibull raindrop spectrum, the effects of the particle scales on laser scattering and attenuation efficiency factor are analyzed, and the attenuation formula of the light wave of a single particle is deduced. The definite equations between the attenuation and the rainfall ratio are obtained. The result shows that scattering intensity of particle in heavy rain is bigger than that in light rain in forward direction, and the forward scattering intensity increases. When laser signal transmits through rain, attenuation coefficient in light rain is big, while it is small in moderate rain and heavy rain, and increases in rainstorm. This result coincides with the facts. Attenuation characteristic of laser in rain provides theoretical basis for laser applied in the communication system working in the rain.

Number of references: 9

Main heading: Rain

Controlled terms: Drops - Forward scattering - Laser theory - Optical communication
- Storms

Uncontrolled terms: Efficiency factor - Mie theory - Raindrop spectra - Rainfall
attenuations - Scattering light

Classification code: 443 Meteorology - 711 Electromagnetic Waves - 717.1 Optical
Communication Systems - 744.1 Lasers, General

DOI: 10.3788/AOS201232.1206003

Database: Compendex
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20130426 新增 13 条

1.

Accession number: 20131616218912

Title: Improvement of corrosion performance of MAO coated AZ31 magnesium alloy by polypropylene post-treatment

Authors: Chen, M.-A.1 ; Xiao, C.1 ; Li, J.-M.2/;;

Author affiliation: 1 School of Materials Science and Engineering, Central South University, Changsha 410083, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Chen, M.-A. (ma-chen@csu.edu.cn)

Source title: Transactions of the Institute of Metal Finishing

Abbreviated source title: Trans Inst Met Finish

Volume: 91

Issue: 2

Issue date: March 2013

Publication year: 2013

Pages: 80-87

Language: English

ISSN: 00202967

E-ISSN: 17459192

CODEN: TIMFA2

Document type: Journal article (JA)

Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United Kingdom

Abstract: In order to improve the corrosion resistance provided by a micro-arc oxidation (MAO) coating on AZ31 magnesium alloy, a polypropylene film was prepared on its surface. Scanning electron microscopy, energy dispersive X-ray analysis and Fourier transform infrared spectroscopy were used to characterise the surfaces of the coatings. The corrosion protective performance of the coatings was evaluated by potentiodynamic polarisation curves, electrochemical impedance spectroscopy and immersion testing. The results show that the microdefects of the MAO coating can be filled by PP and the corrosion resistance of the AZ31 magnesium alloy is improved greatly.

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Number of references: 29

Main heading: Polypropylenes

Controlled terms: Coatings - Corrosion - Corrosion resistance - Electrochemical impedance spectroscopy - Fourier transform infrared spectroscopy - Magnesium alloys - Plastic films - Scanning electron microscopy

Uncontrolled terms: AZ31 magnesium alloy - Corrosion performance - Energy dispersive x-ray - Immersion testing - Microarc oxidation - Poly-propylene film - Post treatment - Protective performance

Classification code: 817.1 Polymer Products - 815.1.1 Organic Polymers - 801 Chemistry
- 741.1 Light/Optics - 542.2 Magnesium and Alloys - 539.1 Metals Corrosion - 539
Metals Corrosion and Protection; Metal Plating

DOI: 10.1179/0020296712Z.000000000086

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131616213334

Title: Performance research on the non-clipped QPSK sine-like modulation of atmospheric laser communication system

Authors: Deng, Lijun¹ ; Ke, Xizheng¹ ; Shi, Weijian¹/邓莉君;柯熙政;史炜坚

Author affiliation: 1 College of Automation and Information Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

Corresponding author: Deng, L. (denglj@xaut.edu.cn)

Source title: Zhongguo Jiguang/Chinese Journal of Lasers

Abbreviated source title: Zhongguo Jiguang

Volume: 40

Issue: 2

Issue date: February 2013

Publication year: 2013

Article number: 0205001

Language: Chinese

ISSN: 02587025

CODEN: ZHJIDO

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: A non-clipped quadrature phase shift keying (QPSK) sine-like modulation technology is proposed in this paper and applied to the atmospheric laser communication system. The atmospheric laser communication channel model is introduced and the atmospheric laser communication system model of non-clipped QPSK sine-like modulation is given. Based on there, the power efficiency, bit error rate (BER), outage probability and channel capacity of atmospheric laser communication systems which adopt non-clipped QPSK sine-like modulation and direct current bias sub-carrier intensity modulation are compared and analyzed. The results demonstrate that the proposed scheme has better anti-noise performance, higher power utilization, lower outage probability and higher channel capacity, and improves the performance of atmospheric laser communication system. The scheme can satisfy the requirements of atmospheric laser communication system.

Number of references: 19

Main heading: Quadrature phase shift keying

Controlled terms: Channel capacity - Electric power utilization - Integrated optics - Modulation - Optical communication - Outages - Telecommunication systems

Uncontrolled terms: Atmospheric laser communications - Direct current bias - Intensity modulations - Modulation technologies - Outage probability - Performance research - Power efficiency - Quadrature phaseshift keying (QPSK)

Classification code: 706.1 Electric Power Systems - 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 717.1 Optical Communication Systems - 741.3 Optical Devices and Systems

DOI: 10.3788/CJL201340.0205001

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131516204320

Title: Alternate dual pulses technique for fiber Bragg grating Ultra-multi-point strain measurement

Authors: Gong, Xin1 ; Hua, Dengxin1 ; Zhang, Pengbo1 ; Hu, Liaolin1 ; Wang, Yufeng1/巩鑫;华灯鑫;章鹏博;胡辽林;王玉峰

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Hua, D. (dengxinhua@xaut.edu.cn)

Source title: Proceedings of SPIE - The International Society for Optical Engineering

Abbreviated source title: Proc SPIE Int Soc Opt Eng

Volume: 8759

Monograph title: Eighth International Symposium on Precision Engineering Measurements and Instrumentation

Issue date: 2013

Publication year: 2013

Article number: 875927

Language: English

ISSN: 0277786X

CODEN: PSISDG

ISBN-13: 9780819495501

Document type: Conference article (CA)

Conference name: 8th International Symposium on Precision Engineering Measurements and Instrumentation

Conference date: August 8, 2012 - August 11, 2012

Conference location: Chengdu, China

Conference code: 96463

Sponsor: International Committee on Measurements and Instrumentation; National Natural Science Foundation of China; Chinese Society for Measurement; China Instrument and Control Society

Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States

Abstract: The research of ultra-multi-point strain detection is one of the important topics at the forefront of optical fiber sensing technology. A newly ultra-multi-point strain measurement system was designed based on optical time-domain reflectometry (OTDR) and Fiber Bragg Grating. Two distributed feedback (DFB) lasers is proposed as laser source to generate the alternately pulsed light, and transmitted to a serial of fiber Bragg gratings with the same low-reflectivity and bandwidth. By the means of the strength of each reflectance spectrum and its return time of signals, the magnitude and location of strain can be accurately determined, and

the numerical simulation shows that more than 1000 FBGs can be multiplexed in OTDR-FBG strain measurement system for a larger strain measurement range. Furthermore, the corresponding driving circuits for nanosecond pulse and temperature control circuits are designed for laser pulse modulation and frequency stabilization control. A OTDR-FBG strain measurement system is developed by using 10 FBGs with the reflectivity of less than 5%, and the system distance resolution of 43 cm is obtained, which verified the feasibility of the system. © 2013 SPIE.

Number of references: 12

Main heading: Fiber Bragg gratings

Controlled terms: Distributed feedback lasers - Fibers - Measurements - Precision engineering - Pulsed lasers - Reflection - Strain measurement

Uncontrolled terms: Distance resolution - Frequency stabilization - Multi-points - Optical fiber sensing technology - Optical time domain reflectometry - OTDR - Reflectance spectrum - Temperature control circuit

Classification code: 943.2 Mechanical Variables Measurements - 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 817 Plastics and Other Polymers: Products and Applications - 744.1 Lasers, General - 741.3 Optical Devices and Systems - 711 Electromagnetic Waves - 812 Ceramics, Refractories and Glass

DOI: 10.1117/12.2014592

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131616214026

Title: Robust filter algorithm of carrier tracking loop for GPS software receiver

Authors: Li, Jiang¹; Qian, Fu-Cai^{1, 2}; Liu, Ding¹/李江;钱富才;刘丁

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an Shaanxi 710048, China

2 State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, Xi'an Shaanxi 710054, China

Corresponding author: Li, J. (lijiang0613@163.com)

Source title: Kongzhi Lilun Yu Yingyong/Control Theory and Applications

Abbreviated source title: Kong Zhi Li Lun Yu Ying Yong

Volume: 30

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 208-214

Language: Chinese

ISSN: 10008152

CODEN: KLYYEB

Document type: Journal article (JA)

Publisher: South China University of Technology, Guangzhou, 510640, China

Abstract: The inhibition of the loop filter noise jitter is an important guarantee for precise continuous tracking of the satellite signal in global positioning system (GPS) software receiver. This paper uses the noise unknown but bounded assumptions, instead of the demanding requirements of the noise statistical properties known in the traditional methods. The application of semidefinite programming approach converts the filtering problem into a convex optimization problem. Adopting the carrier tracking loop robust filtering algorithm to obtain the confidence ellipsoid containing the Doppler shift, we solve the filter tracking problem for GPS receiver in the complex and changing environment. The algorithm is validated by using the analog carrier signal and the actual satellite signal. Results show this method effectively tracks the GPS satellite signals and provides a new way of thinking for designing the loop filter for GPS receivers.

Number of references: 16

Main heading: Global positioning system

Controlled terms: Algorithms - Convex optimization - Satellites - Signal receivers - Tracking (position)

Uncontrolled terms: Carrier tracking loop - Changing environment - Convex optimization problems - Gps software receivers - Robust filters - Semi-definite programming - Statistical properties - Unknown but bounded

Classification code: 921.5 Optimization Techniques - 921 Mathematics - 723.1 Computer Programming - 723 Computer Software, Data Handling and Applications - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 655.2.1 Communication Satellites - 655.2 Satellites

DOI: 10.7641/CTA.2013.20323

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131616213738

Title: Synthesis and photocatalytic activity of reticular Bi₂O₃ photocatalysts

Authors: Ma, Zhan-Ying^{1, 2}; Yao, Bing-Hua¹; He, Yang-Qing¹; Bai, Hai-Ni³; Gao, Yi-Hong^{2/马占营;姚秉华;何仰清;白海妮;高奕红}

Author affiliation: 1 Department of Applied Chemistry, Xi'an University of Technology, Xi'an 710054, China

2 College of Chemistry and Chemical Engineering, Xianyang Normal University, Xianyang 712000, China

3 Physical and Chemical Office, Shaanxi Huaxing Electronic Industry Company, Xianyang 712009, China

Corresponding author: Yao, B.-H.

Source title: Gongneng Cailiao/Journal of Functional Materials

Abbreviated source title: Gongneng Cailiao

Volume: 44

Issue: 4

Issue date: February 28, 2013

Publication year: 2013

Pages: 507-511+516

Language: Chinese

ISSN: 10019731

CODEN: GOCAEA

Document type: Journal article (JA)

Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China

Abstract: The reticular Bi₂O₃ photocatalysts were synthesized via heat treatment process using cotton as template. XRD, SEM, TGA, UV-Vis diffusion spectra were employed to characterize the phase structure, morphology, thermal stability and optical absorption properties of the samples. Results indicated that cotton played an important role in the formation of reticular structure. The flat Bi₂O₃ reticles with different diameter were staggered and overlapped, thus reticular Bi₂O₃ were formed. Using the degradation of MB as a model reaction, the photocatalytic and recycling properties of the reticular Bi₂O₃ were compared with Bi₂O₃ powders. Results indicated that the reticular structure materials showed better photocatalytic properties than Bi₂O₃ powders. The decolorization efficiency of MB solution reached about 93% at irradiation time 100min and remained above 85% upon repetition (4 times). In addition, the formation mechanism of reticular Bi₂O₃ was discussed in detail.

Number of references: 13

Main heading: Photocatalysts

Controlled terms: Cotton - Photocatalysis - Powders - Synthesis (chemical)

Uncontrolled terms: Cotton-template - Diffusion spectra - Formation mechanism -

Heat treatment process - Optical absorption properties - Photocatalytic activities -

Photocatalytic property - Structure materials

Classification code: 536 Powder Metallurgy - 802.2 Chemical Reactions - 803 Chemical Agents and Basic Industrial Chemicals - 804 Chemical Products Generally - 819.1 Natural Fibers

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131516202126

Title: LOSOM: Phase relief imaging can be achieved with confocal system

Authors: Peng, Tong^{1, 2}; Xie, Hao¹; Ding, Yichen¹; Lu, Yiqing³; Jin, Dayong³; Xi, Peng¹/彭彤;;;

Author affiliation: 1 Department of Biomedical Engineering, College of Engineering, Peking University, No. 5 Yiheyuan Road, Beijing 100871, China

2 Department of Physics, Xi'an University of Technology, No. 5 South Jinhua Road, Xi'an 710048, China

3 Advanced Cytometry Labs., MQphotonics Research Centre, Macquarie University, Sydney, NSW 2109, Australia

Corresponding author: Xi, P.

Source title: Progress in Biomedical Optics and Imaging - Proceedings of SPIE

Abbreviated source title: Progr. Biomed. Opt. Imaging Proc. SPIE

Volume: 8553

Monograph title: Optics in Health Care and Biomedical Optics V

Issue date: 2012

Publication year: 2012
Article number: 85531C
Language: English
ISSN: 16057422
ISBN-13: 9780819493088
Document type: Conference article (CA)
Conference name: Optics in Health Care and Biomedical Optics V
Conference date: November 5, 2012 - November 7, 2012
Conference location: Beijing, China
Conference code: 96406
Sponsor: The Society of Photo-Optical Instrumentation Engineers (SPIE); COS - Chinese Optical Society
Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States
Abstract: We reported recently that laser oblique scanning optical microscopy (LOSOM) is able to obtain a relief image in transparent sample directly. To optimize the performance of LOSOM, the parameters such as numerical aperture, the distance between the specimen and the fluorescent medium and the pinhole size are investigated in this work. A beam blocker is introduced in light path which enhances dramatically the visualization of local phase difference.
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Number of references: 10
Main heading: Optics
Controlled terms: Health care
Uncontrolled terms: Local phase - Numerical aperture - Relief imaging - Scanning optical microscopy
Classification code: 461.7 Health Care - 741.1 Light/Optics
DOI: 10.1117/12.2000809
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
7.
Accession number: 20131516204380
Title: Comparison of fringe imaging techniques using Mach-Zehnder and Fabry-Perot interferometer for molecular Doppler wind lidar
Authors: Tan, Linqiu¹ ; Hua, Dengxin¹ ; Wang, Li¹ ; Wang, Yufeng¹;/华灯鑫;汪丽;王玉峰;
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Sponsor: International Committee on Measurements and Instrumentation; National Natural Science Foundation of China; Chinese Society for Measurement; China Instrument and Control Society

Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States

Abstract: The fringe-imaging Fabry-Perot (FIFP) interferometer and fringe-imaging Mach-Zehnder (FIMZ) interferometer as frequency discriminator for incoherent molecular Doppler wind lidar are proposed, analyzed and compared theoretically respectively. Using ZEMAX software, the FIFP interferometer and FIMZ interferometer are designed and simulated respectively. Compared with Fabry-Perot interferometer (FPI), Mach-Zehnder interferometer (MZI) produces equidistant linear parallel fringes instead of circular rings. The record of the MZI fringe pattern is noticeably easier than that of the FPI and can be performed with a cylindrical lens and focused on a linear CCD array rather than a complex circle to line interferometer optical (CLIO) system. According to the U.S. standard atmospheric model, the transmission, signal-to-noise ratio (SNR), sensitivity and wind error for FIFP and FIMZ systems are simulated respectively. The results show that, the MZI sensitivity is lower than that of FPI, however, the MZI offers 4 times higher transmission, resulting to about 1.4 times smaller wind error in the line-of-sight (LOS) velocity component than that of FIFP. In addition, the MZI can be designed with a compensated field to accept sources of appreciable dimensions without significant performance reduction, which will provide an effective technique for Doppler wind lidar to improve the accuracy of wind velocity measurement by using MZI as frequency discriminator. © 2013 SPIE.

Number of references: 10

Main heading: Fabry-Perot interferometers

Controlled terms: Acoustic wave velocity measurement - Charge coupled devices - Computer simulation - Imaging techniques - Lenses - Measurements - Optical radar - Precision engineering

Uncontrolled terms: Doppler lidars - Fabry-Perot - Frequency discriminators - Mach-Zehnder - Wind velocity measurement

Classification code: 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 746 Imaging Techniques - 741.3 Optical Devices and Systems - 741 Light, Optics and Optical Devices - 723.5 Computer Applications - 714.2 Semiconductor Devices and Integrated Circuits

DOI: 10.1117/12.2014822

Database: Compendex

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8.

Accession number: 20131616213976

Title: Divided screen array measurement method of projectile-curtain parameter for multibarrel volleyed weapons

Authors: Tian, Hui1, 2 ; Jiao, Mingxing1 ; Ni, Jinping2 ; Wang, Guohui2/田会;焦明星;倪晋平;王国辉

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2 Shaanxi Province Key Lab of Photoelectric Measurement and Instrument Technology, Xi'an Technological University, Xi'an 710032, China

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Source title: Hongwai yu Jiguang Gongcheng/Infrared and Laser Engineering

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Volume: 42

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 507-512

Language: Chinese

ISSN: 10072276

Document type: Journal article (JA)

Publisher: Chinese Society of Astronautics, P.O. Box 225-32, Tianjin, 300192, China

Abstract: In order to meet the demand of measuring the projectile-curtain parameter of multibarrel volleyed weapons, a method basing on the divided six-light-screen array was put forward. When projectiles from multibarrel volleyed weapons past through the divided screens, each small screen sensor would put out signals. The multi-channels data acquisition device captured these signals and then calculated the times of between different signals. The time sequence for a projectile past through six screens can be identified according to the principle that the flying time between the symmetry screens was the same and the flying time in different position in one screen was different. Finally the flying parameters for every projectile can be worked out. The efficiency of the algorithm has been verified by emulation tests. Besides, the implementation scheme for the light screen was given, and has been verified by the high rate firing tests.

Number of references: 10

Main heading: Projectiles

Controlled terms: Aerospace engineering - Electrical engineering

Uncontrolled terms: Array measurements - Data-acquisition devices - Divided screen - Firing rates - Flying parameters - Impacting coordinate - Implementation scheme - Six-light-screen array

Classification code: 654 Rockets and Rocket Propulsion - 658 Aerospace Engineering, General - 709 Electrical Engineering, General

Database: Compendex

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9.

Accession number: 20131616216516

Title: Hydraulic development of the turbines for Gibe III, Ethiopia

Authors: Wang, Z.N.1, 2 ; Luo, X.Q.1 ; Guo, P.C.1 ; Wang, Y.L.2/;罗兴铸;郭鹏程;

Author affiliation: 1 Xi'an University of Technology, Xi'an City 710048, Shanxi, China

2 Dongfang Electric Machinery Co., Deyang City 61800, Sichuan, China

Corresponding author: Wang, Z.N.

Source title: International Journal on Hydropower and Dams

Abbreviated source title: Int J Hydropower Dams

Volume: 20

Issue: 2

Issue date: 2013

Publication year: 2013

Pages: 46-50

Language: English

ISSN: 13522523

CODEN: IHDAFN

Document type: Journal article (JA)

Publisher: Aqua-Media International Ltd., Westmead Road, Sutton, SM1 4JH, United Kingdom

Abstract: The Gibe III hydro station, on the Omo river, near the city of Sodo in Ethiopia, is the third plant in the Omo river cascade. It will have a total capacity of 1870 MW, generated by ten 187 MW Francis units. This paper discusses key issues for the design of the Gibe III turbines, with particular reference to the optimization of their hydraulic performance by model testing. Analysis of the relevant parameters, characteristics of the powerplant, geometry of the proposed turbine design and performance predictions by a combination of methods are all discussed in this paper.

Number of references: 6

Main heading: Hydraulic motors

Controlled terms: Turbines

Uncontrolled terms: Ethiopia - Hydraulic performance - Key Issues - Model testing
- Performance prediction - Turbine designs

Classification code: 612.3 Gas Turbines and Engines - 632.2 Hydraulic Equipment and Machinery

Database: Compendex

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10.

Accession number: 20131516204386

Title: Design of digital Pound-Drever-Hall frequency stabilizing system for two-cavity dual-frequency Nd:YAG laser

Authors: Xing, Junhong1 ; Jiao, Mingxing1 ; Zheng, Yi1 ; Zheng, Lingling1/邢俊红;焦明星;郑毅;

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Corresponding author: Xing, J.

Source title: Proceedings of SPIE - The International Society for Optical Engineering

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Conference name: 8th International Symposium on Precision Engineering Measurements and Instrumentation

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Sponsor: International Committee on Measurements and Instrumentation; National Natural Science Foundation of China; Chinese Society for Measurement; China Instrument and Control Society

Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States

Abstract: Two-cavity dual-frequency Nd:YAG laser with large frequency difference can be used as an ideal light source for synthetic-wave absolute-distance interferometric system. The operation principle of the two-cavity dual-frequency Nd:YAG laser with large frequency difference has been introduced, and the frequency locking principle of the Pound-Drever-Hall (PDH) method has been analyzed. A FPGA-based digital PDH frequency stabilizing system for the two-cavity dual-frequency Nd:YAG laser has been designed, in which the same frequency reference of a high finesse Fabry-Perot cavity is used and two separate heterodyne interference sub-systems are employed so that two electrical error signals can be obtained. Having been processed through FPGA, the output signals are applied to drive the PZT frequency actuators attached on the two-cavity dual-frequency Nd:YAG laser, as a result both operating frequencies of the two-cavity dual-frequency Nd:YAG laser can be simultaneously frequency-locked to two resonant frequencies of the Fabry-Perot cavity. A frequency stability of better than 10^{-10} will be obtained by use of the digital PDH frequency locking system, which can meet the needs of synthetic-wave absolute-distance interferometry. © 2013 SPIE.

Number of references: 10

Main heading: Neodymium lasers

Controlled terms: Cavity resonators - Fabry-Perot interferometers - Interferometry - Light sources - Natural frequencies - Precision engineering

Uncontrolled terms: Fabry-Perot cavity - Frequency differences - Frequency stabilizing - Heterodyne interference - Interferometric system - ND : YAG lasers - Operating frequency - Pound-Drever-Hall

Classification code: 941.4 Optical Variables Measurements - 941.3 Optical Instruments -

761 Nanotechnology - 744.4 Solid State Lasers - 744 Lasers - 714.3 Waveguides -
711.1 Electromagnetic Waves in Different Media

DOI: 10.1117/12.2015216

Database: Compendex

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11.

Accession number: 20131516204373

Title: Observations of the boundary layer structure, cloud and aerosol properties with portable
Mie scattering lidar

Authors: Yan, Qing¹ ; Hua, Dengxin¹ ; Li, Shichun¹ ; Wang, Yufeng¹ ; Zhou, Zhirong¹;/华灯鑫;
李仕春;王玉峰;;

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an
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Source title: Proceedings of SPIE - The International Society for Optical Engineering

Abbreviated source title: Proc SPIE Int Soc Opt Eng

Volume: 8759

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Conference location: Chengdu, China

Conference code: 96463

Sponsor: International Committee on Measurements and Instrumentation; National Natural
Science Foundation of China; Chinese Society for Measurement; China Instrument and Control
Society

Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States

Abstract: A portable Micro-pulsed Mie scattering lidar at the laser wavelength of 532 nm has
been developed for routine observation of atmospheric optical properties of the lower
troposphere, including boundary layer structure, cloud, the distribution of aerosol and horizontal
visibility and so on. The configuration of lidar and its design methods including the hardware and
software were described in details. The lidar system was controlled by compact computer,
including self adjustment for coaxial lidar, three-dimensional scanning, real-time data processing
of visualization and inversion online. The experimental results illustrate that the system can
measure the atmospheric aerosols up to the range of near 5 km at daytime and up to 15 km at

nighttime under the measurement conditions of laser energy of 50 μ J, signal averaging time of 40s, a receiving aperture 254 mm, range resolution of 7.5 m and analog detection model, which can provide scientific measurement data for studying the atmospheric environment change, particularly for resolving the particulate pollutant generation, transmission and diffusion characteristics. © 2013 SPIE.

Number of references: 10

Main heading: Optical radar

Controlled terms: Atmospheric aerosols - Atmospheric thermodynamics - Boundary layers - Brillouin scattering - Clouds - Measurements - Optical properties - Pollution detection - Precision engineering - Solids

Uncontrolled terms: ABL - Atmospheric optical properties - Boundary layer structure - Diffusion characteristics - Mie-scattering lidar - observation - Real-time data processing - Three-dimensional scanning

Classification code: 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 933 Solid State Physics - 761 Nanotechnology - 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 741.3 Optical Devices and Systems - 651.1 Aerodynamics, General - 454.2 Environmental Impact and Protection - 443.1 Atmospheric Properties - 443 Meteorology - 741.1 Light/Optics

DOI: 10.1117/12.2014571

Database: Compendex

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12.

Accession number: 20131516202127

Title: Design of a real-time portable confocal scanning laser microscope

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Peng¹/杨旭三^{1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96,97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144,145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192,193,194,195,196,197,198,199,200,201,202,203,204,205,206,207,208,209,210,211,212,213,214,215,216,217,218,219,220,221,222,223,224,225,226,227,228,229,230,231,232,233,234,235,236,237,238,239,240,241,242,243,244,245,246,247,248,249,250,251,252,253,254,255,256,257,258,259,260,261,262,263,264,265,266,267,268,269,270,271,272,273,274,275,276,277,278,279,280,281,282,283,284,285,286,287,288,289,290,291,292,293,294,295,296,297,298,299,300,301,302,303,304,305,306,307,308,309,310,311,312,313,314,315,316,317,318,319,320,321,322,323,324,325,326,327,328,329,330,331,332,333,334,335,336,337,338,339,340,341,342,343,344,345,346,347,348,349,350,351,352,353,354,355,356,357,358,359,360,361,362,363,364,365,366,367,368,369,370,371,372,373,374,375,376,377,378,379,380,381,382,383,384,385,386,387,388,389,390,391,392,393,394,395,396,397,398,399,400,401,402,403,404,405,406,407,408,409,410,411,412,413,414,415,416,417,418,419,420,421,422,423,424,425,426,427,428,429,430,431,432,433,434,435,436,437,438,439,440,441,442,443,444,445,446,447,448,449,450,451,452,453,454,455,456,457,458,459,460,461,462,463,464,465,466,467,468,469,470,471,472,473,474,475,476,477,478,479,480,481,482,483,484,485,486,487,488,489,490,491,492,493,494,495,496,497,498,499,500,501,502,503,504,505,506,507,508,509,510,511,512,513,514,515,516,517,518,519,520,521,522,523,524,525,526,527,528,529,530,531,532,533,534,535,536,537,538,539,540,541,542,543,544,545,546,547,548,549,550,551,552,553,554,555,556,557,558,559,560,561,562,563,564,565,566,567,568,569,570,571,572,573,574,575,576,577,578,579,580,581,582,583,584,585,586,587,588,589,590,591,592,593,594,595,596,597,598,599,600,601,602,603,604,605,606,607,608,609,610,611,612,613,614,615,616,617,618,619,620,621,622,623,624,625,626,627,628,629,630,631,632,633,634,635,636,637,638,639,640,641,642,643,644,645,646,647,648,649,650,651,652,653,654,655,656,657,658,659,660,661,662,663,664,665,666,667,668,669,670,671,672,673,674,675,676,677,678,679,680,681,682,683,684,685,686,687,688,689,690,691,692,693,694,695,696,697,698,699,700,701,702,703,704,705,706,707,708,709,710,711,712,713,714,715,716,717,718,719,720,721,722,723,724,725,726,727,728,729,730,731,732,733,734,735,736,737,738,739,740,741,742,743,744,745,746,747,748,749,750,751,752,753,754,755,756,757,758,759,760,761,762,763,764,765,766,767,768,769,770,771,772,773,774,775,776,777,778,779,780,781,782,783,784,785,786,787,788,789,790,791,792,793,794,795,796,797,798,799,800,801,802,803,804,805,806,807,808,809,810,811,812,813,814,815,816,817,818,819,820,821,822,823,824,825,826,827,828,829,830,831,832,833,834,835,836,837,838,839,840,841,842,843,844,845,846,847,848,849,850,851,852,853,854,855,856,857,858,859,860,861,862,863,864,865,866,867,868,869,870,871,872,873,874,875,876,877,878,879,880,881,882,883,884,885,886,887,888,889,890,891,892,893,894,895,896,897,898,899,900,901,902,903,904,905,906,907,908,909,910,911,912,913,914,915,916,917,918,919,920,921,922,923,924,925,926,927,928,929,930,931,932,933,934,935,936,937,938,939,940,941,942,943,944,945,946,947,948,949,950,951,952,953,954,955,956,957,958,959,960,961,962,963,964,965,966,967,968,969,970,971,972,973,974,975,976,977,978,979,980,981,982,983,984,985,986,987,988,989,990,991,992,993,994,995,996,997,998,999,1000,1001,1002,1003,1004,1005,1006,1007,1008,1009,1010,1011,1012,1013,1014,1015,1016,1017,1018,1019,1020,1021,1022,1023,1024,1025,1026,1027,1028,1029,1030,1031,1032,1033,1034,1035,1036,1037,1038,1039,1040,1041,1042,1043,1044,1045,1046,1047,1048,1049,1050,1051,1052,1053,1054,1055,1056,1057,1058,1059,1060,1061,1062,1063,1064,1065,1066,1067,1068,1069,1070,1071,1072,1073,1074,1075,1076,1077,1078,1079,1080,1081,1082,1083,1084,1085,1086,1087,1088,1089,1090,1091,1092,1093,1094,1095,1096,1097,1098,1099,1100,1101,1102,1103,1104,1105,1106,1107,1108,1109,1110,1111,1112,1113,1114,1115,1116,1117,1118,1119,1120,1121,1122,1123,1124,1125,1126,1127,1128,1129,1130,1131,1132,1133,1134,1135,1136,1137,1138,1139,1140,1141,1142,1143,1144,1145,1146,1147,1148,1149,1150,1151,1152,1153,1154,1155,1156,1157,1158,1159,1160,1161,1162,1163,1164,1165,1166,1167,1168,1169,1170,1171,1172,1173,1174,1175,1176,1177,1178,1179,1180,1181,1182,1183,1184,1185,1186,1187,1188,1189,1190,1191,1192,1193,1194,1195,1196,1197,1198,1199,1200,1201,1202,1203,1204,1205,1206,1207,1208,1209,1210,1211,1212,1213,1214,1215,1216,1217,1218,1219,1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Abstract: A portable video-rate confocal laser scanning microscope (CLSM) is implemented with polygon mirror and galvanometric mirror employed as the fast and slow axis scanner, respectively. The system can be applied for noninvasively imaging skin and other tissue. The dimension of this real-time CLSM is only 33x20x12cm³ with weigh of 1.780 kg. Here we used a single Complex Programmable Logic Device (CPLD) to generate the control and synchronization signals for real time confocal microscopy. Utilizing NI image acquisition card, the CLSM system can acquire and store the real-time images. So that high resolution confocal microscopy is achieved simultaneously. © Copyright SPIE.

Number of references: 12

Main heading: Optics

Controlled terms: Confocal microscopy - Health care - Image acquisition - Logic devices - Mirrors - Tissue

Uncontrolled terms: Complex programmable logic device - Confocal laser scanning microscope - Confocal microscopes - Confocal scanning laser microscope - CPLD - real-time - Real-time images - Synchronization signals

Classification code: 461.2 Biological Materials and Tissue Engineering - 461.7 Health Care - 721.2 Logic Elements - 723 Computer Software, Data Handling and Applications - 741.1 Light/Optics - 741.3 Optical Devices and Systems

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13.

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Title: Watertightness, cracking resistance, and self-healing of asphalt concrete used as a water barrier in da

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Abstract: The coefficient of permeability of hydraulic asphalt concrete is in the range 10⁻⁸-10⁻¹⁰ cm/s. Laboratory test results show that triaxial specimens in axial compression can undergo axial strains up to 18% without any significant increase in permeability until approaching the compressive strength. For temperatures between 5 and 20 °C and strain rates between 2 × 10⁻³%/s and 5 × 10⁻³%/s, conventional hydraulic asphalt concrete can tolerate 1%-3% tensile strains before cracking in direct tension tests and strains up to 3%-4% in bending. At 20 °C the tensile and bending strains at cracking are 2-4 times higher than those at 0 °C, and at -20 °C they are approximately 0.2% and 0.8%, respectively. Asphalt concrete possesses pronounced crack self-healing properties. In the experiments, the crack leakage rate dropped 1-4 orders of magnitude within a few hours and the cracked specimens regained 55% of the intact tensile strength after only 1 day of self-healing. In summary, the comprehensive series of laboratory tests documents that asphalt concrete has characteristics that make the material extremely well suited for use in impervious barriers in dams, and the test results reported herein can be of great use in barrier design.

Number of references: 23

Main heading: Cracks

Controlled terms: Asphalt concrete - Concretes - Dams - Design - Tensile strength

Uncontrolled terms: Coefficient of permeability - Cracking resistance - Direct tension tests - Resistance to cracking - Self-healing - Self-healing properties - Water barriers - Watertightness

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Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: Based on the theory of comprehensive structure potential, the stress-strain relations of intact loess, remolded loess and saturated loess have been researched by independent developed true triaxial apparatus. It has been reflected that the relationship between stress ratio structure parameter and generalized shear strain along with consolidation pressure and stress path. The mathematical model has been established. Meanwhile, the reliability of true triaxial apparatus and stress ratio structure parameter has been validated. It is shown that the stress-strain relations have distinct difference for different soil states. The stress-strain relations tend to the characteristic of strain softening or hyperbola for the intact loess. The stress-strain relations tend to the characteristic of hyperbola and strain hardening for the remolded or saturated loess. The soil structure reduces gradually with the increasing of shear deformation and water content. The consolidation pressure σ_c and intermediate principal stress parameter b are the influential factors for soil structure. The simulation formula can accurately reflect the theory and experimentation. It is convenient for application in projects.

Number of references: 8

Main heading: Sediments

Controlled terms: Mathematical models - Soils - Strain hardening

Uncontrolled terms: Generalized shear strains - Intermediate principal stress - Stress paths - Structural characteristics - Structure parameter - Theory of comprehensive structure potential - True triaxial - True triaxial apparatus

Classification code: 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 537.1 Heat Treatment Processes - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131616221537

Title: Resistivity relaxation of anisotropic conductive polymer composites

Authors: Gao, Jie-Feng¹; Huang, Hua-Dong¹; Yan, Ding-Xiang¹; Ren, Peng-Gang²; Zeng, Xiang-Bu¹; Li, Zhong-Ming¹;;;任鹏刚;;;

Author affiliation: 1 College of Polymer Science and Engineering, State Key Laboratory of Polymer Materials Engineering, Sichuan University, Chengdu, 610065, Sichuan, China

2 Institute of Printing and Packaging Engineering, Xian University of Technology, Xian, Shaanxi, China

Corresponding author: Li, Z.-M. (zmli@scu.edu.cn)

Source title: Journal of Macromolecular Science, Part B: Physics

Abbreviated source title: J Macromol Sci Part B Phys

Volume: 52

Issue: 6

Issue date: May 1, 2013

Publication year: 2013

Pages: 788-796

Language: English

ISSN: 00222348

E-ISSN: 1525609X

CODEN: JMAPBR

Document type: Journal article (JA)

Publisher: Taylor and Francis Inc., 325 Chestnut St, Suite 800, Philadelphia, PA 19106, United States

Abstract: The electrical properties of anisotropic carbon nanotubes (CNTs)/polycarbonate (PC)/polyethylene (PE) (ACPC) strongly depended on the CNTs concentration. When the ACPC was subjected to isothermal treatment (IT), the resistivity variation in both the parallel and perpendicular directions had the characteristics of a relaxation as a function of temperature. During the IT the orientation of the PC microfibrils was gradually damaged and CNTs/PC microfibrils were deformed and changed to short fibers, leading to a transition from anisotropy to isotropy. The velocity of the conductive network reconstruction could be characterized by the relaxation time, and the resistivity of the composite during the IT process can be instantaneously predicted based on the relaxation equation. The relaxation time and the equilibrium resistivity of the composite during IT were determined by the IT temperature and CNT content. © 2013

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Number of references: 23

Main heading: Anisotropy

Controlled terms: Carbon nanotubes - Composite materials - Electric conductivity - Electric properties - Isotherms - Relaxation time

Uncontrolled terms: Conductive networks - Conductive polymer composites -

Equilibrium resistivity - Isothermal treatment - macromolecular relaxation -

Micro-fibrils - Relaxation equations - Resistivity variation

Classification code: 933 Solid State Physics - 931.2 Physical Properties of Gases, Liquids and Solids - 931 Classical Physics; Quantum Theory; Relativity - 951 Materials Science -

811 Cellulose, Paper and Wood Products - 701.1 Electricity: Basic Concepts and Phenomena

- 415 Metals, Plastics, Wood and Other Structural Materials - 761 Nanotechnology

DOI: 10.1080/00222348.2012.730356

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131716227473

Title: Web3D-based product design and interactive customization technology

Authors: Guo, Lei^{1, 2}; Ji, Xiaomin¹; Bai, Xiaobo¹/; 吉晓民;

Author affiliation: 1 Xi'an University of Technology, Xi'an, 710048, China

2 University of Electronic and Technology of China, Zhongshan Institute, Zhongshan, China

Corresponding author: Guo, L. (79115521@QQ.com)

Source title: Key Engineering Materials

Abbreviated source title: Key Eng Mat

Volume: 546

Monograph title: Digital Design and Manufacturing Technology III

Issue date: 2013

Publication year: 2013

Pages: 1-5

Language: English

ISSN: 10139826

CODEN: KEMAEY

ISBN-13: 9783037856260

Document type: Conference article (CA)

Conference name: 2012 National Conference on Digital Design and Manufacturing Technology, DDMTC 2012

Conference date: November 12, 2012 - November 14, 2012

Conference location: Ningbo, China

Conference code: 96579

Sponsor: Zhejiang University of Technology; Productivity Promotion Center of Ningbo

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: In mass customization mode, it was an inevitable trend that user custom products become really required through network. Aimed at the characteristics of the products display and Customization on the Internet, Web3D are used in developing Customization methods of products form, material and color. It was proved that the method could help to improve consumers' ability to customize products interactive on internet, which can promote participation of the customers and enhance the competitive ability of the enterprises. © (2013) Trans Tech Publications.

Number of references: 10

Main heading: Web services

Controlled terms: Color - Internet - Manufacture - Materials - Product design

Uncontrolled terms: Competitive ability - Custom products - Customization - Form - Inevitable trends - Mass customization - Products form - Web3D

Classification code: 913.4 Manufacturing - 913.1 Production Engineering - 741.1

Light/Optics - 951 Materials Science - 723 Computer Software, Data Handling and Applications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 718 Telephone Systems and Related Technologies; Line Communications

DOI: 10.4028/www.scientific.net/KEM.546.1

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131716235580

Title: A new massive data processing framework under cloud environment for digital community

Authors: Hou, Ke^{1, 2}; Zhang, Jing¹/;张璟

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Economic and Management, Xi'an Shiyou University, Xi'an 710065, China

Corresponding author: Hou, K.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 6

Issue date: 2013

Publication year: 2013

Pages: 1079-1088

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)

Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan

Abstract: Digital community involves e-government, e-commerce, smart health and other applications. With the increase of customers and types of business, it becomes more important for digital community to process massive data efficiently. Although, the current cloud-based applications can provide some elastic and on-demand calculation abilities to digital community, their underlying programming models still have certain limitations. This study aims to provide a new framework of massive data processing for digital community. In the framework, multiple programming models are adopted and each programming model handles the specific calculations that they do best. These calculations mainly include embarrassingly parallel calculation, iteration calculation and data-dependent complex calculation. To improve the performance of the framework, the programming model connection pool and the virtual subnet are designed and applied. Compared to Hadoop and its modified version, on average, the proposed framework can reduce runtime by 1.32. The experimental results show that the proposed framework has higher generality and efficiency. Moreover, it is reasonable and valuable for digital community to analyze comprehensively trade area on geographical location and business volume. © 2013 Asian Network for Scientific Information.

Number of references: 25

Main heading: Iterative methods

Controlled terms: Cloud computing - Data processing - Metadata

Uncontrolled terms: Cloud environments - Cloud-based applications - Digital communities - Geographical locations - Map-reduce - Parallel calculation - Programming models - Virtual subnet

Classification code: 722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 921.6

Numerical Methods

DOI: 10.3923/itj.2013.1079.1088

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131716238937

Title: Several shear spatially mobilized planes and anisotropic strength criteria of soils

Authors: Shao, Sheng-Jun^{1, 2}; Xu, Ping^{1, 2}; Chen, Chang-Lu^{1, 3}/邵生俊;徐萍;陈昌禄

Author affiliation: 1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shaanxi Key Laboratory of Loess Mechanics and Engineering, Xi'an 710048, China

3 Bijie University, Bijie 551700, China

Corresponding author: Shao, S.-J. (sjshao@xaut.edu.cn)

Source title: Yantu Gongcheng Xuebao/Chinese Journal of Geotechnical Engineering

Abbreviated source title: Yantu Gongcheng Xuebao

Volume: 35

Issue: 3

Issue date: March 2013

Publication year: 2013

Pages: 422-435

Language: Chinese

ISSN: 10004548

CODEN: YGXUEB

Document type: Journal article (JA)

Publisher: Chinese Society of Civil Engineering, 34 Hujuguan, Nanjing, 210024, China

Abstract: The strength laws of natural soils are complex because of their anisotropic and structural properties, and stress anisotropy and damage of structures under loading. By analyzing the shear failure planes or spatially mobilized planes of the Mohr-Coulomb criterion, Drucker-Prager criterion and Matsuoka-Nakai strength criterion, two kinds of spatially mobilized planes, static spatially mobilized plane with unchanging normal direction and dynamic spatially mobilized plane with changing normal direction, are proposed respectively by changing the characteristics of normal direction on the spatially mobilized plane. According to the Mohr-Coulomb failure plane and Matsuoka-Nakai's spatially mobilized plane, the static axial symmetrical compression spatially mobilized plane and axial extension spatially mobilized plane are obtained respectively under axial symmetrical compression and axial extension stress states. Assuming the linear relation between shear stress and normal stress on the spatially mobilized plane of soil element, the new isotropic and anisotropic strength criteria are established based on the stress conditions of two kinds of static spatially mobilized planes, which are determined respectively by the axial symmetrical compression and axial symmetrical extension stress states. For the intact loess with micro-structural characteristics including vertical crack and transversely isotropic body, the anisotropic strength is revealed by the true triaxial experiments on intact loess, in which the maximum principal stress, intermediate principal stress or minor principal stress act on the vertical direction of loess sample. Considering the relationship between the Cartesian coordinates corresponding to vertical crack of loess and rotation of the maximum, intermediate and minor principal stress axes, the spatial strength surface in the principal stress space being the same as that in the Cartesian coordinates. At the same time, the rationality of the above strength criteria is validated by the true axial test results of intact loess with vertical crack structure. The new strength criteria are analyzed by the geometrical characteristics of strength surfaces in the principal stress three-dimensional space.

Number of references: 7

Main heading: Strength of materials

Controlled terms: Anisotropy - Cracks - Loading - Sediments - Soils

Uncontrolled terms: Anisotropic strength - Loess - Spatially mobilized planes - Strength criteria - Strength failures

Classification code: 421 Strength of Building Materials; Mechanical Properties - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 672 Naval Vessels - 931.2 Physical Properties of Gases, Liquids and Solids

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131716238568

Title: Crystal growth process and mechanism of rods Y2O3 powders synthesized by hydrothermal treatment

Authors: Wang, Ying1, 2 ; Zhao, Gao-Yang1/王莹;赵高扬

Author affiliation: 1 College of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 College of Materials Science and Engineering, Shaanxi University of Science and Technology, Xi'an 710021, China

Corresponding author: Zhao, G.-Y.

Source title: Gongneng Cailiao/Journal of Functional Materials

Abbreviated source title: Gongneng Cailiao

Volume: 44

Issue: 5

Issue date: March 15, 2013

Publication year: 2013

Pages: 649-652

Language: Chinese

ISSN: 10019731

CODEN: GOCAEA

Document type: Journal article (JA)

Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China

Abstract: Y2O3 nano-and micron-rods were hydrothermal synthesized using yttrium nitrate (Y(NO3)3·6H2O) and ammonia solution at low temperature. The products via the hydrothermal treatment yttrium nitrate were characterized by X-ray diffraction, transmission electron microscopy and scanning electron microscopy. Results show Y2O3 sheets with low crystallinity were obtained with the hydrothermal treatment at 80°C for 4h. Y2(OH)5(NO3)·H2O crystal was synthesized from the unshaped colloidal Y(OH)3-n(NO3)n·mH2O and the composition was changed from Y2(OH)5(NO3)·H2O to Y4O(OH)9(NO3) with higher temperature and higher press. Y2O3 rods with higher crystallinity were obtained at 180°C for 4h. The different shape Y4O(OH)9(NO3) crystal growth process was following the dissolving-crystallization mechanism and the recrystallization were existed.

Number of references: 16

Main heading: Yttrium alloys

Controlled terms: Crystal growth - Hydrothermal synthesis - Nitrates - Scanning

electron microscopy - Transmission electron microscopy - X ray diffraction - Yttrium
Uncontrolled terms: Ammonia solution - Crystal growth mechanism - Crystal growth
process - Crystallinities - Different shapes - Hydrothermal treatments - Low
temperatures

Classification code: 933.1.2 Crystal Growth - 933.1.1 Crystal Lattice - 804.2 Inorganic
Compounds - 802.2 Chemical Reactions - 741.3 Optical Devices and Systems - 741.1
Light/Optics - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20131716232257

Title: Fast transmission to remote cooperative groups: A new key management paradigm

Authors: Wu, Qianhong^{1, 2}; Qin, Bo^{2, 3}; Zhang, Lei⁴; Domingo-Ferrer, Josep²; Manjón, Jesús
A.2/伍前红;秦波;

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Universitat Rovira i Virgili, Tarragona 43007, Spain

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4 Shanghai Key Laboratory of Trustworthy Computing, Software Engineering Institute, East
China Normal University, Shanghai 200062, China

Corresponding author: Wu, Q. (qianhong.wu@urv.cat)

Source title: IEEE/ACM Transactions on Networking

Abbreviated source title: IEEE ACM Trans Networking

Volume: 21

Issue: 2

Issue date: 2013

Publication year: 2013

Pages: 621-633

Article number: 6247486

Language: English

ISSN: 10636692

CODEN: IEANEP

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331,
Piscataway, NJ 08855-1331, United States

Abstract: The problem of efficiently and securely broadcasting to a remote cooperative group
occurs in many newly emerging networks. A major challenge in devising such systems is to
overcome the obstacles of the potentially limited communication from the group to the sender,
the unavailability of a fully trusted key generation center, and the dynamics of the sender. The
existing key management paradigms cannot deal with these challenges effectively. In this paper,
we circumvent these obstacles and close this gap by proposing a novel key management
paradigm. The new paradigm is a hybrid of traditional broadcast encryption and group key
agreement. In such a system, each member maintains a single public/secret key pair. Upon seeing
the public keys of the members, a remote sender can securely broadcast to any intended

subgroup chosen in an ad hoc way. Following this model, we instantiate a scheme that is proven secure in the standard model. Even if all the nonintended members collude, they cannot extract any useful information from the transmitted messages. After the public group encryption key is extracted, both the computation overhead and the communication cost are independent of the group size. Furthermore, our scheme facilitates simple yet efficient member deletion/addition and flexible rekeying strategies. Its strong security against collusion, its constant overhead, and its implementation friendliness without relying on a fully trusted authority render our protocol a very promising solution to many applications. © 1993-2012 IEEE.

Number of references: 41

Main heading: Public key cryptography

Controlled terms: Access control - Ad hoc networks - Communication - Security of data

Uncontrolled terms: broadcast - Broadcast encryption - Computation overheads - Cooperative computing - Key generation centers - Key management - Limited communication - Trusted authorities

Classification code: 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing

DOI: 10.1109/TNET.2012.2208201

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130510 新增 6 条

1.

Accession number: 20131816284958

Title: Nonsmooth dynamic behaviors inherited from an ecohydrological model: Mutation, bifurcation, and chaos

Authors: Lin, Mu^{1, 2}; Tian, Fuqiang²; Hu, Heping²; Liu, Dengfeng³;;刘登峰

Author affiliation: 1 School of Applied Mathematics, Central University of Finance and Economics, Beijing 100081, China

2 Department of Hydraulic Engineering, State Key Laboratory of Hydrosience and Engineering, Tsinghua University, Beijing 100084, China

3 Key Laboratory of Northwest Water Resources and Environmental Ecology of MOE, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Tian, F. (tianfq@tsinghua.edu.cn)

Source title: Mathematical Problems in Engineering

Abbreviated source title: Math. Probl. Eng.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 731042

Language: English

ISSN: 1024123X

E-ISSN: 15635147

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: The existence of nontrivial dynamic behaviors in a hydrological system is intensively discussed in the literature. However, most of the work has been done from the nonlinear data analysis perspective, with only a few exceptions, due to the mathematical difficulties for theoretical analysis. In this study, a simple but comprehensive enough ecohydrological model with the pulsed atmospheric forcing was developed from the process analysis perspective. The model was then utilized to analyze the non-trivial dynamic behaviors in a coupled ecohydrological system qualitatively and numerically. Our results confirm the existence of multiple stationary states discussed by many researchers. Furthermore, parameter bifurcation was studied and the phenomenon of mutation is found to be rather common. Also, the chaotic characteristic of the system state is obtained under some specific parameters. Parts of these behaviors were seldom reported through the deterministic dynamic analysis done previously. © 2013 Mu Lin et al.

Number of references: 33

Main heading: Engineering

Controlled terms: Mathematical techniques

Uncontrolled terms: Atmospheric forcing - Chaotic characteristics - Eco-hydrological models - Hydrological system - Mathematical difficulty - Non-smooth dynamics - Nonlinear data analysis - Parameter bifurcation

Classification code: 901 Engineering Profession - 921 Mathematics

DOI: 10.1155/2013/731042

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131816296119

Title: Image segmentation based on modified FCM algorithms

Authors: Shi, Zhenghao^{1, 2}; He, Lifeng³; Nakamura, Tsuyoshi¹; Itoh, Hidenori¹/石争浩^{1,2,3,4};

Author affiliation: 1 School of Computer Science and Engineering, Nagoya Institute of Technology, Nagoya 464-8555, Japan

2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

3 Department of Radiology, University of Chicago, 5841 South Maryland Avenue, MC 2026, Chicago, IL 60637, United States

Corresponding author: Shi, Z. (zhshi@juno.ics.nitech.ac.jp)

Source title: International Conference on Artificial Intelligence and Pattern Recognition 2007, AIPR 2007

Abbreviated source title: Int. Conf. Artif. Intell. Pattern Recogn., AIPR

Monograph title: International Conference on Artificial Intelligence and Pattern Recognition 2007, AIPR 2007

Issue date: 2007

Publication year: 2007

Pages: 63-69

Language: English

ISBN-13: 9781615677214

Document type: Conference article (CA)

Conference name: 2007 International Conference on Artificial Intelligence and Pattern Recognition, AIPR 2007

Conference date: July 9, 2007 - July 12, 2007

Conference location: Orlando, FL, United states

Conference code: 96737

Sponsor: Int. Soc. Res. Sci. Technol. (ISRST)

Publisher: ISRST, PO Box 2464 Tallahassee,, FL 32316-2464, United States

Abstract: In this paper, two image segmentation methods, namely Genetic Simulate based FCM (Fuzzy C-Means, FCM) image segmentation and Rough Set based FCM image segmentation, are proposed. In the first methods, the FCM Clustering algorithm, Simulated Annealing algorithm (Simulated annealing, SA) and Genetic algorithm (Genetic algorithm, GA) are combined to overcome the drawbacks of conventional FCM segmentation algorithm, namely slow computation speed and over-dependence on initial value. In this method, the fuzzy cluster center is coded as a variable length chromosome, genetic operators such as intercross and mutation are introduced into a Simulated Annealing algorithm as an enhancement, which allows to recombine solutions produced by individual simulate annealing processes at fixed time intervals. At the same time Metropolis criterion is taken as a standard for a genetic operation to accept crossover and mutated individuals, this improves the convergence of the algorithm. Owing to the complementarities of FCM, SA and GA, this modified algorithm not only can escape from local minima but also holds higher parallel clustering segmentation capability concurrently. In the second method, Rough Set theory is used to optimal the performance of FCM in analyzing vagueness and uncertainty inherent in building clustering set. By reduction technique (the core of Rough Sets), those redundant initial cluster centers in the initial cluster set are eliminated this is very useful for improving the convergence of the FCM algorithm. Experimental results demonstrate the efficiency and the effectiveness of the proposed methods.

Number of references: 21

Main heading: Clustering algorithms

Controlled terms: Artificial intelligence - Genetic algorithms - Image segmentation - Pattern recognition - Rough set theory - Simulated annealing - Uncertainty analysis

Uncontrolled terms: Initial cluster centers - Metropolis criterion - Reduction techniques - Segmentation algorithms - Segmentation methods - Simulated annealing algorithms - Vagueness and uncertainty - Variable length chromosome

Classification code: 716 Telecommunication; Radar, Radio and Television - 721 Computer Circuits and Logic Elements - 723 Computer Software, Data Handling and Applications - 921 Mathematics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory - 922.1 Probability Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131816300259

Title: Electromagnetic microwave absorption of Fe-Si flakes with different mixtures

Authors: Tian, N.1 ; You, C.Y.1 ; Liu, J.1 ; Qu, F.1 ; Wang, C.H.1 ; Lu, Z.X.1/田娜;游才印;;

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: You, C.Y. (caiyinyou@xaut.edu.cn)

Source title: Journal of Magnetism and Magnetic Materials

Abbreviated source title: J Magn Magn Mater

Volume: 339

Issue date: August 2013

Publication year: 2013

Pages: 114-118

Language: English

ISSN: 03048853

CODEN: JMMMD C

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Flakes of Fe-Si alloy were fabricated to get a relatively high permeability. Additives of graphene, TiO₂ and ZnO were mixed with the Fe-Si flakes. The magnetic properties of the Fe-Si alloy flakes were slightly affected by mixing, causing little decrease of the complex permeability. But the complex permittivity was significantly reduced due to the enhanced interfacial resistivity after mixing with graphene, TiO₂ or ZnO, resulting in a better electromagnetic impedance matching. The best microwave absorption performance was achieved by mixing TiO₂: for an absorber thickness of 1.5 mm, a minimum reflection loss (RL) of -14.1 dB was obtained at 7.1 GHz with a large width of 3.6 GHz in which the RL is lower than -10 dB; with the absorber thickness of 2.4 mm, the minimum RL reaches -35.3 dB at 4.2 GHz. The different effects among graphene, TiO₂ and ZnO additives on the electromagnetic properties are mainly related to the morphology of the additives rather than their intrinsic characteristics. © 2013 Elsevier B.V. All rights reserved.

Number of references: 24

Main heading: Silicon alloys

Controlled terms: Dielectric properties - Electromagnetism - Graphene - Iron alloys - Iron compounds - Mixing - Silicon - Titanium dioxide - Zinc alloys - Zinc oxide

Uncontrolled terms: Absorber thickness - Complex permeability - Complex permittivity - Electromagnetic impedance - Electromagnetic properties - Fe-Si flakes - Intrinsic characteristics - Microwave absorption

Classification code: 804 Chemical Products Generally - 802.3 Chemical Operations - 761 Nanotechnology - 804.2 Inorganic Compounds - 701 Electricity and Magnetism - 546.3 Zinc and Alloys - 545.3 Steel - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals

DOI: 10.1016/j.jmmm.2013.03.003

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20131816284988

Title: Information fields navigation with piece-wise polynomial approximation for high-performance OFDM in WSNs

Authors: Wei, Wei¹ ; Shen, Peiyi² ; Zhang, Ying³ ; Zhang, Liang²/魏崑;沈沛意;张颖;张亮

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 National School of Software, Xidian University, Xi'an 710071, Shaanxi, China

3 School of Electronic and Information Engineering, Xi'an Jiaotong University, Xi'an 710049, China

Corresponding author: Wei, W. (weiwei@xaut.edu.cn)

Source title: Mathematical Problems in Engineering

Abbreviated source title: Math. Probl. Eng.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 901509

Language: English

ISSN: 1024123X

E-ISSN: 15635147

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: Since Wireless sensor networks (WSNs) are dramatically being arranged in mission-critical applications, it changes into necessary that we consider application requirements in Internet of Things. We try to use WSNs to assist information query and navigation within a practical parking spaces environment. Integrated with high-performance OFDM by piece-wise polynomial approximation, we present a new method that is based on a diffusion equation and a position equation to accomplish the navigation process conveniently and efficiently. From the point of view of theoretical analysis, our jobs hold the lower constraint condition and several inappropriate navigation can be amended. Information diffusion and potential field are introduced to reach the goal of accurate navigation and gradient descent method is applied in the algorithm. Formula derivations and simulations manifest that the method facilitates the solution of typical sensor network configuration information navigation. Concurrently, we also treat channel estimation and ICI mitigation for very high mobility OFDM systems, and the communication is between a BS and mobile target at a terrible scenario. The scheme proposed here combines the piece-wise polynomial expansion to approximate timevariations of multipath channels. Two near symbols are applied to estimate the first-and second-order parameters. So as to improve the estimation accuracy and mitigate the ICI caused by pilot-aided estimation, the multipath channel parameters were reestimated in timedomain employing the decided OFDM symbol. Simulation results show that this method would improve system performance in a complex environment. © 2013 Wei Wei et al.

Number of references: 12

Main heading: Wireless sensor networks

Controlled terms: Estimation - Multipath propagation - Navigation - Orthogonal

frequency division multiplexing - Partial differential equations - Polynomial approximation
- Telecommunication systems

Uncontrolled terms: Application requirements - Gradient Descent method - Information diffusion - Internet of Things (IOT) - Mission critical applications - Network configuration - Pilot-aided estimations - Wireless sensor network (WSNs)

Classification code: 921 Mathematics - 732 Control Devices - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716.3 Radio Systems and Equipment - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves

DOI: 10.1155/2013/901509

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131816299426

Title: Current carrying friction and wear characteristics of Ti₃AlC₂ by novel method of infiltration sintering

Authors: Xiao, Q.D.1 ; Lv, Z.L.1/肖琪聘;吕振林

Author affiliation: 1 Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xiao, Q. D. (xiaoqidan253@163.com)

Source title: Energy Materials: Materials Science and Engineering for Energy Systems

Abbreviated source title: Energy Mater. Mater. Sci. Eng. Energy Syst.

Volume: 7

Issue: 3

Issue date: 2012

Publication year: 2012

Pages: 202-207

Language: English

ISSN: 17489237

E-ISSN: 17489245

Document type: Journal article (JA)

Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United Kingdom

Abstract: High purity Ti₃AlC₂ samples were prepared by an infiltration sintering method. The current carrying friction and wear characteristics of high pure bulk Ti₃AlC₂ dry sliding against a GCr15 bearing steel disc were experimentally investigated on a pin-on-disk type tester at several sliding speeds from 20 to 60 m s⁻¹, different electric currents from 0 to 100 A and normal pressures from 0.1 to 0.6 MPa. It was found that the highly pure Ti₃AlC₂ exhibits an increasing friction coefficient (0.11-0.65) and an increasing wear rate (2.13-7.75×10⁻⁶ mm³ N⁻¹ m⁻¹) with the electric current increasing from 0 to 100 A; the normal pressure (0.1-0.6 MPa) and the sliding speed (20- 60 m s⁻¹) also have a complex but relatively weak influence on them. The minimum value of friction coefficient was 0.11 when the sliding electric current, speed and normal pressure were set to 0 A, 60 m s⁻¹ and 0.6 MPa; the wear rate reached the maximum value 7.75×10⁻⁶

mm³ N⁻¹ m⁻¹ when the sliding electric current, speed and normal pressure respectively were set to 100 A, 60 m s⁻¹ and 0.6 MPa. The low friction coefficient can be attributed to the presence of a continuous frictional oxide film consisting of an amorphous mixture of Al, Ti and Fe oxides on the friction surface, which have a significant antifriction effect on the friction surfaces. The percentage of oxide film cover was relatively higher when the electric current was 0 A, while the percentage of oxide film cover decreased with increasing electric current. The increase in the wear rate was ascribed to the ablation of the electric arc when the electric current was high. © 2012 Institute of Materials.

Number of references: 14

Main heading: Titanium oxides

Controlled terms: Electric arcs - Electric currents - Friction - Oxide films -

Polycrystalline materials - Sintering - Wear of materials

Uncontrolled terms: Amorphous mixtures - Antifriction effect - Coefficient of frictions

- Friction and wear characteristics - Friction coefficients - Friction surfaces - Low friction coefficients - Wear rates

Classification code: 933.1 Crystalline Solids - 931.1 Mechanics - 804.2 Inorganic

Compounds - 951 Materials Science - 712.1.2 Compound Semiconducting Materials -

536.1 Powder Metallurgy Operations - 421 Strength of Building Materials; Mechanical

Properties - 701.1 Electricity: Basic Concepts and Phenomena

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131816295491

Title: Improved random aggregate model for numerical simulations of concrete engineering simulations of concrete engineering

Authors: Yuan, Qin1 ; Junrui, Chai1, 2 ; Faning, Dang1/覃源;柴军瑞;党发宁

Author affiliation: 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an

University of Technology, 710048, Xi'an, China

2 College of Civil and Hydropower Engineering, China Three Gorges University, Yichang, 443002, Hubei, China

Corresponding author: Yuan, Q. (lanelyly@163.com)

Source title: Journal of Civil Engineering and Management

Abbreviated source title: J. Civ. Eng. Manage.

Volume: 19

Issue: 2

Issue date: April 1, 2013

Publication year: 2013

Pages: 285-295

Language: English

ISSN: 13923730

E-ISSN: 18223605

Document type: Journal article (JA)

Publisher: Taylor and Francis, 4 Park Square, Milton Park, Abingdon, Oxfordshire, OX14 4RN,

United Kingdom

Abstract: In numerical simulations, concrete is usually considered as a three-phase material consisting of an aggregate, a cement matrix, and an interfacial transition zone (ITZ).

Three-dimensional modeling of concrete usually requires extremely large computational requirements. In this study, an improved random aggregate model for numerical simulations of concrete is developed, which can minimize the number of elements, optimize the ITZ thickness, and create internal cracks and holes. Numerical investigations on the cracks form as well as deflection and tensile strength are also conducted based on three-point bending tests. The simulation results agree well with the experimental results. Copyright © 2013 Vilnius Gediminas Technical University (VGTU) Press.

Number of references: 24

Main heading: Aggregates

Controlled terms: Concretes - Cracks - Tensile strength - Three dimensional

Uncontrolled terms: Computational requirements - Concrete engineering - Interfacial transition zone - Numerical investigations - Random aggregate model - Three point bending - Three-dimensional modeling - Three-point bending test

Classification code: 406 Highway Engineering - 412 Concrete - 421 Strength of Building Materials; Mechanical Properties - 902.1 Engineering Graphics

DOI: 10.3846/13923730.2012.760481

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

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20130517 新增 11 条

1.

Accession number: 20131916313508

Title: Effective search space reduction for human pose estimation with Viterbi recurrence algorithm

Authors: Han, Guijin^{1, 2}; Zhu, Hong²; Ge, Jianrong^{3/;;}

Author affiliation: 1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 School of Automation, Xi'an University of Posts and Telecommunications, Xi'an, 710121, China

3 Modern Education Technology Centre, Shijiazhuang Vocational Technology Institute, Shijiazhuang, 050000, China

Corresponding author: Han, G. (hgjin123@126.com)

Source title: International Journal of Modelling, Identification and Control

Abbreviated source title: Int. J. Model. Ident. Control

Volume: 18

Issue: 4

Issue date: 2013

Publication year: 2013

Pages: 341-348

Language: English

ISSN: 17466172

E-ISSN: 17466180

Document type: Journal article (JA)

Publisher: Inderscience Enterprises Ltd., Editorial Office, P O Box 735, Olney, Bucks., MK46 5WB, MK46 5WB, United Kingdom

Abstract: In this paper, an efficient algorithm for estimating human pose in static images is presented, which is based on pictorial structure model and Viterbi recurrence algorithm. Our algorithm mainly solves three problems in the process of estimating human pose: 1) for overcoming the influence of illumination change and local deformation, a new part appearance model based on HOG feature and SVM is presented; 2) for reducing search space, a new approach using location prior and matching threshold is presented, which can also achieve increasing the rate of convergence and improving the accuracy of human pose estimation; 3) an inference algorithm using Viterbi recurrence algorithm is designed. Experiments results show this new algorithm is more efficient. Copyright © 2013 Inderscience Enterprises Ltd.

Number of references: 27

Main heading: Viterbi algorithm

Controlled terms: Image matching - Inference engines

Uncontrolled terms: HOG feature - Human pose estimations - Pictorial structures - Recurrence algorithms - Search spaces

Classification code: 723.1 Computer Programming - 723.4.1 Expert Systems - 741 Light, Optics and Optical Devices

DOI: 10.1504/IJMIC.2013.053539

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20131916319296

Title: Fabrication of alumina porous ceramics substrate by multilayer freeze-tape-casting process

Authors: Han, Shendan¹; Zhao, Kang¹; Tang, Yufei¹; Xu, Lei¹/韩沈丹;赵康;汤玉斐;徐雷

Author affiliation: 1 School of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhao, K. (kzhao@xaut.edu.cn)

Source title: Kuei Suan Jen Hsueh Pao/Journal of the Chinese Ceramic Society

Abbreviated source title: Kuei Suan Jen Hsueh Pao

Volume: 41

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 140-144

Language: Chinese

ISSN: 04545648

CODEN: KSYHA5

Document type: Journal article (JA)

Publisher: Chinese Ceramic Society, Baiwanzhuang, Beijing, 100831, China

Abstract: In order to avoid co-firing and reduce the cracking failure caused by different

expansion rates of metal/ceramic composite heat sink, a method for the production of highly aligned porous ceramics substrate by multilayer freeze-tape-casting process with aqueous alumina slurry was proposed. The effects of solid content and freezing temperature on the porosity and pore size were investigated, and the pore morphology (e.g., degree of pore alignment, pore size and interconnection between the pores) of the fabricated samples was characterized by field emission scanning electron microscopy. Furthermore, the thermal fatigue properties of porous ceramic substrate were also examined. The results show that the porosity (volume fraction) gradually decreases from 62.1% to 51.4% with the increase of solid content (mass fraction) from 30% to 40%, and the pore size decreases gradually with the decrease of freezing temperature from -15°C to -45°C. The optimum thermal fatigue properties were obtained at the solid content of 40% and the freezing temperature of -45°C. Also, the pore channels between the layers of ceramic substrate produced by multilayer freeze-tape-casting process could be connected.

Number of references: 16

Main heading: Ceramic materials

Controlled terms: Alumina - Field emission microscopes - Freezing - Multilayers - Pore size - Substrates - Thermal fatigue

Uncontrolled terms: Aqueous alumina slurry - Field emission scanning electron microscopy - Freeze-drying - Freezing temperatures - Porosity and pore size - Porous ceramics - Tape casting - Thermal fatigue properties

Classification code: 933.1 Crystalline Solids - 822.2 Food Processing Operations - 812.1 Ceramics - 951 Materials Science - 801 Chemistry - 461 Bioengineering and Biology - 421 Strength of Building Materials; Mechanical Properties - 741.3 Optical Devices and Systems

DOI: 10.7521/j.issn.0454-5648.2013.02.03

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131916310522

Title: Photoluminescence spectroscopic study of BaMgAl₁₀O₁₇:Eu Phosphor coated with CaF₂ via a sol-gel process

Authors: Li, Feng^{1, 2}; Yang, Ying²; Song, Yang¹; Wang, Wubao³; Yang, Wei³; Yang, Bingya³/
李峰,杨莺;;;;

Author affiliation: 1 School of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Physical Science and Technology, Nanjing University of Aeronautics and Astronautics, Nanjing 210016, China

3 IRICO Group Corporation, Xianyang 712000, China

Corresponding author: Li, F. (flsglf@gmail.com)

Source title: Journal of Spectroscopy

Abbreviated source title: J. Spectroscopy

Volume: 1

Issue: 1

Issue date: 2013

Publication year: 2013

Article number: 312519

Language: English

ISSN: 23144920

E-ISSN: 23144939

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: CaF₂ coatings on the surface of BaMgAl₁₀O₁₇:Eu (BAM) were prepared by a sol-gel process, and the optical properties and antithermal degradation properties were analyzed by photoluminescence spectra recorded under 254 nm and 147 nm excitation. The results indicate that BAM particles were successfully coated with CaF₂ and CaF₂ coatings show an interesting property to enhance the blue emission intensity of BAM. The optimum antithermal degradation properties were obtained at the weight ratio 0.4 wt% under 254 nm excitation and 0.3 wt% under 147 nm excitation, respectively. © 2013 Feng Li et al.

Number of references: 20

Main heading: Sol-gel process

Controlled terms: Coatings - Optical properties - Photoluminescence - Spectroscopic analysis

Uncontrolled terms: Blue emission intensity - Photoluminescence spectrum - Spectroscopic studies - Weight ratios

Classification code: 539 Metals Corrosion and Protection; Metal Plating - 741.1 Light/Optics - 801 Chemistry - 813.1 Coating Techniques

DOI: 10.1155/2013/312519

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20131916319625

Title: An advanced RFID localization algorithm based on region division and error compensation

Authors: Li, Junhuai¹; Zhang, Guomou¹; Yu, Lei¹; Wang, Zhixiao¹; Zhang, Jing¹/李军怀;;;张璟

Author affiliation: ¹ School of Computer Science and Engineering, Xi'an University of Technology Xi'an, Shaanxi 710048, China

Corresponding author: Li, J. (lijunhuai@xaut.edu.cn)

Source title: KSII Transactions on Internet and Information Systems

Abbreviated source title: KSII Trans. Internet Inf. Syst.

Volume: 7

Issue: 4

Issue date: April 13, 2013

Publication year: 2013

Pages: 670-691

Language: English

E-ISSN: 19767277

Document type: Journal article (JA)

Publisher: Korean Society for Internet Information, 4th Floor, Unsan Building,, 646-6 Yeoksam 1-Dong, Gangnam-Gu,, 135-911, Korea, Republic of

Abstract: In RSSI-based RFID(Radio Frequency IDentification) indoor localization system, the signal path loss model of each sub-region is different from others in the whole localization area due to the influence of the multi-path phenomenon and other environmental factors. Therefore, this paper divides the localization area into many sub-regions and constructs separately the signal path loss model of each sub-region. Then an improved LANDMARC method is proposed. Firstly, the deployment principle of RFID readers and tags is presented for constructing localization sub-region. Secondly, the virtual reference tags are introduced to create a virtual signal strength space with RFID readers and real reference tags in every sub-region. Lastly, k nearest neighbor (KNN) algorithm is used to locate the target object and an error compensating algorithm is proposed for correcting localization result. The results in real application show that the new method enhances the positioning accuracy to 18.2% and reduces the time cost to 30% of the original LANDMARC method without additional tags and readers. © 2013 KSII.

Number of references: 28

Main heading: Algorithms

Controlled terms: Error compensation - Radio frequency identification (RFID)

Uncontrolled terms: Environmental factors - Indoor localization systems - Indoor locations - K nearest neighbor algorithm - Landmarc - Positioning accuracy - Region division - Virtual reference tags

Classification code: 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 723 Computer Software, Data Handling and Applications - 731.1 Control Systems - 921 Mathematics

DOI: 10.3837/tiis.2013.04.004

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131916309762

Title: Large area photoconductive terahertz emitter for 1.55 μm excitation based on an InGaAs heterostructure

Authors: Mittendorff, Martin^{1, 2} ; Xu, Ming^{1, 3} ; Dietz, Roman J. B.⁴ ; Künzel, Harald⁴ ; Sartorius, Bernd⁴ ; Schneider, Harald¹ ; Helm, Manfred^{1, 2} ; Winnerl, Stephan¹/徐鸣

Author affiliation: 1 Helmholtz-Zentrum Dresden-Rossendorf, PO Box 510119, D-01314 Dresden, Germany

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3 Department of Applied Physics, Xi'an University of Technology, PO Box 904, Xi'an, Shaanxi, 710048, China

4 Fraunhofer Institute for Telecommunication, Heinrich-Hertz-Institute, Einsteinufer 37, D-10587 Berlin, Germany

Source title: Nanotechnology

Abbreviated source title: Nanotechnology

Volume: 24

Issue: 21

Issue date: May 31, 2013

Publication year: 2013

Article number: 214007

Language: English

ISSN: 09574484

E-ISSN: 13616528

CODEN: NNOTER

Document type: Journal article (JA)

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: We present scalable large area terahertz (THz) emitters based on a nanoscale multilayer InGaAs/InAlAs heterostructure and a microstructured electrode pattern. The emitters are designed for pump lasers working at the telecommunication wavelength of 1.55 μm . Electric THz fields of more than 2.5 V cm⁻¹ are reached with moderate pump powers of 80 mW, the corresponding spectrum extends up to 3 THz. The saturation characteristics have been investigated for different pump laser spot sizes. For small pump powers of less than 50 mW the emitted THz field is nearly independent of the spot size, for higher pump powers and small spot sizes a clear saturation of the generated THz pulse can be observed. Hence the use of scalable emitters is especially promising for high power fibre laser systems. The spectral content of the generated radiation is nearly independent of the parameters spot size, pump power, and bias voltage, which allows for stable operation in spectroscopic applications. © 2013 IOP Publishing Ltd.

Number of references: 38

Main heading: Pumping (laser)

Controlled terms: Nanostructured materials - Nanotechnology

Uncontrolled terms: High power fibre laser - Microstructured electrodes - Nanoscale multilayers - Photoconductive terahertz emitters - Saturation characteristic - Scalable emitters - Spectroscopic application - Telecommunication wavelengths

Classification code: 744.1 Lasers, General - 761 Nanotechnology

DOI: 10.1088/0957-4484/24/21/214007

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20131916319333

Title: Microwave hydrothermal synthesis of anatase nanotubes and their photocatalytic performance

Authors: Niu, Jinfen¹; Yao, Binghua¹; Peng, Chao¹; Zhang, Fanhong¹/钮金芬;姚秉华;彭超;张凡宏

Author affiliation: 1 School of Science, Xi'an University of Technology, Xi'an 710054, China

Corresponding author: Niu, J. (niu.jinfen@xaut.edu.cn)

Source title: Kuei Suan Jen Hsueh Pao/Journal of the Chinese Ceramic Society

Abbreviated source title: Kuei Suan Jen Hsueh Pao

Volume: 41

Issue: 1

Issue date: January 2013

Publication year: 2013

Pages: 83-88

Language: Chinese

ISSN: 04545648

CODEN: KSYHA5

Document type: Journal article (JA)

Publisher: Chinese Ceramic Society, Baiwanzhuang, Beijing, 100831, China

Abstract: Titanate nanotubes (TNT) were firstly prepared with anatase particles (TO) as a precursor by a concentrated alkaline hydrothermal method, and then anatase titania nanotubes (WTNT) were synthesized with TNT as a raw material by a microwave hydrothermal method. The adsorption and photocatalytic degradation performance of tetracycline hydrochloride (TC) were evaluated under dark condition and visible light irradiation. The products were characterized with X-ray diffraction, transmission electron microscope, and UV-visible diffuse reflectance spectroscopy, respectively. The results show that the as-prepared WTNT samples synthesized under 2.0 MPa is single-crystalline anatase. The WTNT samples treated after microwave hydrothermal treatment appear a hollow tubular structure with the outer diameter of 10 nm and the length of approximately 100-200 nm. The band gap of TNT and WTNT are greater than that of TO precursor. The adsorption process of TC on three catalysts can be described by a pseudo-second-order kinetics model. The WTNT exhibits a superior photocatalytic degradation capability to TC under visible light irradiation.

Number of references: 14

Main heading: Nanotubes

Controlled terms: Adsorption - Hydrothermal synthesis - Mesoporous materials - Microwaves - Photocatalysis - Photodegradation - Transmission electron microscopy - X ray diffraction

Uncontrolled terms: Anatase - Microwave hydrothermal - Microwave hydrothermal method - Microwave hydrothermal synthesis - Microwave-hydrothermal treatment - Tetracycline hydrochloride - Transmission electron microscope - UV-visible diffuse reflectance spectroscopy

Classification code: 931.3 Atomic and Molecular Physics - 931.2 Physical Properties of Gases, Liquids and Solids - 802.3 Chemical Operations - 802.2 Chemical Reactions - 761 Nanotechnology - 741.3 Optical Devices and Systems - 711 Electromagnetic Waves

DOI: 10.7521/j.issn.0454-5648.2013.01.17

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20131916319287

Title: Influence of boron-doping amount on microstructure, optical and electrical properties of P-type a-Si: H films

Authors: Shi, Huiying¹ ; Dong, Dan¹ ; Jiang, Bailing¹ ; Lu, Yuanyuan¹ ; Liu, Ning¹/时惠英;董丹;蒋百灵;卢媛媛

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Shi, H. (hy-shi@163.com)

Source title: Kuei Suan Jen Hsueh Pao/Journal of the Chinese Ceramic Society

Abbreviated source title: Kuei Suan Jen Hsueh Pao

Volume: 41

Issue: 3

Issue date: March 2013

Publication year: 2013

Pages: 364-369

Language: Chinese

ISSN: 04545648

CODEN: KSYHA5

Document type: Journal article (JA)

Publisher: Chinese Ceramic Society, Baiwanzhuang, Beijing, 100831, China

Abstract: A series of P-type a-Si: H films with different flow rates of borane were prepared by a plasma enhanced chemical vapor deposition method. The influence of boron-doping amount on the microstructures and properties of a-Si:H films was analyzed. The P-type a-Si: H film with the optimal boron-doped amount was annealed in vacuum so as to investigate the influence of the film crystal structure change on the properties. The results indicate that with the increase of boron-doping amount, the microstructures of P type a-Si: H films have no substantial change, and the band gaps and electrical properties appear varying. The optimum boron-doping amount was proven to be 1.0%. The band gap of a-Si: H film decreased from 1.81 to 1.72 eV and the conductivity increased by 3 orders of magnitude after annealing. The crystal structure of film could improve the electrical properties rather than the boron-doping ratio.

Number of references: 16

Main heading: Semiconductor doping

Controlled terms: Annealing - Electric conductivity - Electric properties - Energy gap - Metallic films - Microstructure - Plasma enhanced chemical vapor deposition - Silicon

Uncontrolled terms: a-Si:H - Boron-doped - Boron-doping - Hydrogenated amorphous silicon films - In-vacuum - Microstructures and properties - Optical and electrical properties - Orders of magnitude

Classification code: 933 Solid State Physics - 932.3 Plasma Physics - 931.3 Atomic and Molecular Physics - 714.2 Semiconductor Devices and Integrated Circuits - 951 Materials Science - 712.1.1 Single Element Semiconducting Materials - 539 Metals Corrosion and Protection; Metal Plating - 537.1 Heat Treatment Processes - 531 Metallurgy and Metallography - 701.1 Electricity: Basic Concepts and Phenomena

DOI: 10.7521/j.issn.0454-5648.2013.03.15

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20131916309724

Title: Depth adaptive zooming visual servoing for a robot with a zooming camera

Authors: Xin, Jing¹ ; Chen, Kemin¹ ; Bai, Lei¹ ; Liu, Ding¹ ; Zhang, Jian²/辛菁;;刘丁;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, China

2 Faculty of Engineering and Information Technology, University of Technology (UTS), Sydney, Australia

Corresponding author: Xin, J. (xinj@xaut.edu.cn)

Source title: International Journal of Advanced Robotic Systems

Abbreviated source title: Int. J. Adv. Rob. Syst.

Volume: 10

Issue date: February 12, 2013

Publication year: 2013

Article number: 120

Language: English

ISSN: 17298806

E-ISSN: 17298814

Document type: Journal article (JA)

Publisher: InTech Europe, Slavka Krautzeka 83/A, 51000 Rijeka, Croatia, 51000, Croatia

Abstract: To solve the view visibility problem and keep the observed object in the field of view (FOV) during the visual servoing, a depth adaptive zooming visual servoing strategy for a manipulator robot with a zooming camera is proposed. Firstly, a zoom control mechanism is introduced into the robot visual servoing system. It can dynamically adjust the camera's field of view to keep all the feature points on the object in the field of view of the camera and get high object local resolution at the end of visual servoing. Secondly, an invariant visual servoing method is employed to control the robot to the desired position under the changing intrinsic parameters of the camera. Finally, a nonlinear depth adaptive estimation scheme in the invariant space using Lyapunov stability theory is proposed to estimate adaptively the depth of the image features on the object. Three kinds of robot 4DOF visual positioning simulation experiments are conducted. The simulation experiment results show that the proposed approach has higher positioning precision. © 2013 Xin et al.

Number of references: 22

Main heading: Visual servoing

Controlled terms: Cameras - Estimation - Experiments - Manipulators - Robots

Uncontrolled terms: Adaptive estimation - Intrinsic parameters - Lyapunov stability theory - Manipulator robots - Positioning precision - Robot visual servoing - Visual positioning - Visual servoing methods

Classification code: 731 Automatic Control Principles and Applications - 732 Control Devices - 742.2 Photographic Equipment - 901.3 Engineering Research - 921 Mathematics

DOI: 10.5772/54566

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20131916312483

Title: Corrosion behavior of AZ91/AZ91-0.4%Nd alloys in 3.5wt.% NaCl

Authors: Zhang, Jumei¹; Wang, Zhihu²; Cai, Hui¹; Zhu, Ming¹; Niu, Libin¹/张菊梅;王志虎;蔡辉;朱明;;

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Science and Technology, Xian 710054, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xian 710048, China

Corresponding author: Zhang, J. (feiyue-zjm@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 291-294

Monograph title: Advances in Energy Science and Technology

Issue date: 2013

Publication year: 2013

Pages: 699-702

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037856345

Document type: Conference article (CA)

Conference name: 2012 International Conference on Sustainable Energy and Environmental Engineering, ICSEEE 2012

Conference date: December 29, 2012 - December 30, 2012

Conference location: Guangzhou, China

Conference code: 95887

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The microstructure and corrosion behavior of commercial AZ91/AZ91-0.4%Nd alloys were investigated by OM, immersion test and weight-loss method. It was found that the number of Nd element in the AZ91 magnesium alloy has effect on the grain refining efficiency, the coarse β -Mg₁₇Al₁₂ phase distributed along the grain boundaries transformed into granular, and the granular or acicular Al₃Nd phase precipitated in matrix. The addition of Nd element significantly reduces the corrosion rate of AZ91-0.4%Nd magnesium alloy, as a result the corrosion resistance of alloy was improved obviously. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Neodymium

Controlled terms: Corrosion resistance - Corrosive effects - Grain boundaries -

Magnesium alloys - Microstructure - Neodymium alloys

Uncontrolled terms: Addition of nd - AZ91 magnesium alloys - Corrosion behavior -

Grain refining efficiency - Immersion tests - Mg₁₇Al₁₂ phase - Weight loss method

Classification code: 933.1 Crystalline Solids - 933 Solid State Physics - 804 Chemical

Products Generally - 951 Materials Science - 803 Chemical Agents and Basic Industrial

Chemicals - 542.2 Magnesium and Alloys - 539.1 Metals Corrosion - 547.2 Rare Earth

Metals

DOI: 10.4028/www.scientific.net/AMM.291-294.699

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20131916319680

Title: Multi-channel access technology based on wavelength division multiplexing in wireless

UV communication mesh network

Authors: Zhao, Tai-fei¹ ; Zhang, Ai-li¹ ; Xue, Rong-li¹/赵太飞;;

Author affiliation: 1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Zhao, T. (year623@163.com)

Source title: Optoelectronics Letters

Abbreviated source title: Optoelectron. Lett.

Volume: 9

Issue: 3

Issue date: 2013

Publication year: 2013

Pages: 208-212

Language: English

ISSN: 16731905

Document type: Journal article (JA)

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: In this paper, the multi-channel access technology of wavelength division multiplexing (WDM) in the wireless ultraviolet (UV) scattering communication is studied. A multi-interface and multi-channel device is deployed in each UV transceiver node. The band-pass filter is configured in the receiving node so as to realize the multi-channel access by use of the UV WDM technology. Both the UV communication node model and the UV channel model are established. Three types of UV no-line-of-sight (NLOS) multi-channel communications are simulated in the mesh topologies with NS2. The results show that the UV multi-channel access technology can increase network throughput effectively with using WDM. © 2013 Tianjin University of Technology and Springer-Verlag Berlin Heidelberg.

Number of references: 15

Main heading: Wavelength division multiplexing

Controlled terms: Bandpass filters - Communication

Uncontrolled terms: Access technology - Mesh topologies - Multichannel communication - Multichannel devices - Network throughput - Receiving nodes - UV communication - WDM technology

Classification code: 703.2 Electric Filters - 716 Telecommunication; Radar, Radio and Television

DOI: 10.1007/s11801-013-2398-7

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20131916319441

Title: Reliability evaluation of high-speed train bearing with minimum sample

Authors: Zhu, Dexin¹ ; Liu, Hongzhao¹/朱德馨;刘宏昭

Author affiliation: 1 Faculty of Mechanical and Precision Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhu, D. (zdx_cn@163.com)

Source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)/Journal of Central South University

(Science and Technology)

Abbreviated source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)

Volume: 44

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Issue date: March 2013

Publication year: 2013

Pages: 963-969

Language: Chinese

ISSN: 16727207

CODEN: ZDXZAC

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: For the problem of reliability evaluation about the high-speed train bearings in the case of minimum sample and zero-failure reliability test evaluation, the prior information and the experimental information were fused using Bayes data statistical theory, and the mathematical model of the accumulation failure probability was established. According to the least square method, the undetermined parameters of the two parameter Weibull distribution were solved and the reliability mathematical model was obtained about the high-speed train bearing. The results show that the problem of the high-speed train bearing's reliability evaluation is worked out in the minimum sample and zero-failure situation and a method is provided for evaluating the high-speed train bearing's reliability and the safety.

Number of references: 15

Main heading: Railroad cars

Controlled terms: Least squares approximations - Mathematical models - Railroads - Reliability - Weibull distribution

Uncontrolled terms: Bayes method - Failure Probability - High speed trains - Least square methods - Minimum sample - Prior information - Reliability Evaluation - Statistical theory

Classification code: 681 Railway Plant and Structures - 682 Railroad Rolling Stock - 682.1.1 Railroad Cars - 921 Mathematics - 921.6 Numerical Methods - 922.2 Mathematical Statistics

Database: Compendex

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20130524 新增 8 条

1.

Accession number: 20132016340261

Title: Effect of high-temperature aging treatment on properties of welded 310S stainless steel

Authors: Chen, Wen-Ge¹ ; He, Jian-Xiang² ; Xie, Xiao-Bin² ; Zhang, Hui¹/陈文革;何建祥;谢小彬;张辉

Author affiliation: 1 Department of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Sunrise Technology Co Ltd, Xi'an 710002, China

Corresponding author: Chen, W.-G. (wgchen001@263.net)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 95-99

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: Influence of carbon and sulfur in the atmosphere of coal firing on properties of welded 310S stainless steel before and after high-temperature aging treatment was studied by means of OM, SEM/EDX, XRD and impact and tensile tests. The results show that the aged sample by the different heat treatment suffers more severe corrosion than the unaged sample. The formation of σ phase due to aging treatment above 700°C, reduces Cr content around grain boundaries in 310S stainless steel, which results in the decrease of corrosion resistance of 310S stainless steel. At the same time, grain grows, impact toughness is reduced significantly, and fracture mode changes from microvoid coalescence ductile fracture to cleavage fracture.

Number of references: 12

Main heading: Stainless steel

Controlled terms: Aging of materials - Brittle fracture - Carbon - Coalescence - Corrosion resistance - Ductile fracture - Grain boundaries - Sulfur - Tensile testing - Welding

Uncontrolled terms: Aging treatment - Cleavage fracture - Coal firing - Cr content - Fracture mode - High temperature aging - Severe corrosion - Tensile tests

Classification code: 804 Chemical Products Generally - 801.3 Colloid Chemistry - 545.3 Steel - 933.1 Crystalline Solids - 539.1 Metals Corrosion - 422.2 Strength of Building Materials : Test Methods - 421 Strength of Building Materials; Mechanical Properties - 538.2 Welding

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132016323583

Title: Phenylene-thiophene oligomer derivatives for thin-film Transistors: Structure and semiconductor performances

Authors: Duan, Zongfan^{1, 2} ; Ohuchi, Hirokuni² ; Yanagi, Yuichiro² ; Takayanagi, Yutaro² ; Zhao, Gaoyang¹ ; Nishioka, Yasushiro²/段宗范;;;

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 College of Science and Technology, Nihon University, Funabashi, Chiba 274-8501, Japan

Source title: Japanese Journal of Applied Physics

Abbreviated source title: Jpn. J. Appl. Phys.

Volume: 52

Issue: 3 PART 2

Monograph title: Active-Matrix Flatpanel Displays and Devices - TFT Technologies and FPD Materials

Issue date: March 2013

Publication year: 2013

Article number: 03BB07

Language: English

ISSN: 00214922

E-ISSN: 13474065

Document type: Journal article (JA)

Publisher: Japan Society of Applied Physics, 1-12-3 Kudan-Kita, Chiyoda-ku, Tokyo, 102, Japan

Abstract: Two phenylene-thiophene oligomer derivatives, 2,8-bis[5-(4-n-hexylphenyl)-2-thienyl]dibenzothiophene (28HPTDBT) and 3,7-bis[5-(4-n-hexylphenyl)-2-thienyl]dibenzothiophene (37HPTDBT), were used as active materials in thin-film organic field-effect transistors (OFETs). Although the two molecules have similar structures, they exhibited obvious differences in photophysical, crystal, π -stacking, and electrical properties. 28HPTDBT is an amorphous material and hence showed no semiconductor characteristics in its thin-film OFETs, while 37HPTDBT exhibited high crystallinity and strong π -stacking in the solid state, thus resulting in high charge carrier mobilities. The effects of gate insulators and annealing treatment on transistor performances were also investigated. Thin-film OFETs based on 37HPTDBT with an octadecanylethyltrichlorosilane (OTS)-treated SiO₂ gate insulator exhibited excellent field-effect performances with a maximum mobility of 0.3 cm² V⁻¹ s⁻¹ and a high I_{on}/I_{off} current ratio of 1.5×10^4 . Although annealing treatment improved the crystallinity of the thin films, the appearance of voids (cracks) resulted in a decrease in the charge carrier mobilities in the OFETs. © 2013 The Japan Society of Applied Physics.

Number of references: 26

Main heading: Thin film transistors

Controlled terms: Carrier mobility - Display devices - Electric properties - Oligomers - Organic field effect transistors - Thiophene

Uncontrolled terms: Active material - Annealing treatments - Crystallinities - Current ratios - Dibenzothiophenes - High crystallinity - Organic field-effect transistor (OFETs) - Transistor performance

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 714.2

Semiconductor Devices and Integrated Circuits - 722.2 Computer Peripheral Equipment -

804 Chemical Products Generally - 804.1 Organic Compounds - 933 Solid State Physics

DOI: 10.7567/JJAP.52.03BB07

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20131916321804

Title: Tracking and identification for GPS/DR integrated navigation system with unknown parameters

Authors: Li, Jiang¹ ; Qian, Fu-Cai^{1, 2} ; Liu, Ding¹ ; Hu, Shao-Lin¹/李江;钱富才;刘丁;胡绍林

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, Xi'an 710054, China

Corresponding author: Li, J. (lijiang0613@163.com)

Source title: Dianzi Yu Xinxu Xuebao/Journal of Electronics and Information Technology

Abbreviated source title: Dianzi Yu Xinxu Xuebao

Volume: 35

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 921-926

Language: Chinese

ISSN: 10095896

CODEN: DKXUEC

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: This paper proposes a filtering method for GPS/DR (Global Positioning System/Dead-Reckoning) integrated navigation system with unknown parameters. This method firstly structures a self-organizing state space model, and then estimates the state vector by using Monte Carlo filtering method for this new system model. Because particle filter is easy to make a search of the unknown parameters into a subset of the initial sampling for the self-organization model an artificial fish swarm-particle filter algorithm is put forward. The algorithm not only can estimate the system state, but also can make the sampling distribution of the unknown parameters move to the true parameter distribution. Ultimately, the true value of the unknown parameters are identified. The simulation results show the effectiveness of the proposed method.

Number of references: 15

Main heading: Monte Carlo methods

Controlled terms: Algorithms - Identification (control systems) - Navigation systems - State space methods

Uncontrolled terms: Artificial fish swarm algorithms - GPS/DR integrated navigations - Integrated navigation systems - MONTE CARLO - Monte Carlo filtering - Parameter distributions - Sampling distribution - Self-organizing state space models

Classification code: 434.4 Waterway Navigation - 723 Computer Software, Data Handling and Applications - 731.1 Control Systems - 921 Mathematics - 922.2 Mathematical Statistics

DOI: 10.3724/SP.J.1146.2012.01065

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132016340265

Title: Effect of dual phase treatment on microstructure and mechanical properties of S135 drill pipe steel

Authors: Luo, She-Ji1, 2 ; Wang, Rong2 ; Zhao, Kang1/雒设计;王荣;赵康

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Materials Science and Engineering, Xi'an Shiyou University, Xi'an 710065, China

Corresponding author: Luo, S.-J. (sjluo@xsyu.edu.cn)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 118-122

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: Effects of dual phase treatment on microstructure and mechanical properties of S135 drill pipe steel were studied by means of optical microscope (OM), scanning electron microscopy (SEM) and mechanical property testing. The results show that the ferrite-martensite dual phase microstructure is obtained for the steel heat-treated at the temperatures of 760-800°C. With increasing of dual-phase treatment temperature, the volume of martensite increases and the volume of ferrite decreases, the strength and hardness of the steel increase, the plasticity and toughness of the steel decrease, the fracture mode changes from ductile fracture to brittle fracture. The work-hardening exponent of the steel increases, and two n values are observed for the steel after dual-phase treatment.

Number of references: 13

Main heading: Drill pipe

Controlled terms: Brittle fracture - Ductile fracture - Martensitic steel - Mechanical properties - Microstructure - Scanning electron microscopy - Steel pipe

Uncontrolled terms: Dual phase microstructure - Dual-phase treatment - Fracture mode - Fracture morphology - Mechanical property testing - Microstructure and mechanical properties - Optical microscopes - Treatment temperature

Classification code: 421 Strength of Building Materials; Mechanical Properties - 511.2 Oil Field Equipment - 545.3 Steel - 741.1 Light/Optics - 933 Solid State Physics - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20131916320759

Title: Accurate measurement of the jitter time of GaAs photoconductive semiconductor switches triggered by a one-to-two optical fiber

Authors: Shi, Wei^{1, 2}; Zhang, Lin¹; Gui, Huaimeng¹; Hou, Lei¹; Xu, Ming¹; Qu, Guanghui¹/施卫;张林;;侯磊;徐鸣;屈光辉

Author affiliation: 1 Applied Physics Department, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Transient Optics and Photonics, Xi'an Institute of Optics and Precision Mechanics, Xi'an 710119, China

Source title: Applied Physics Letters

Abbreviated source title: Appl Phys Lett

Volume: 102

Issue: 15

Issue date: April 15, 2013

Publication year: 2013

Article number: 154106

Language: English

ISSN: 00036951

CODEN: APPLAB

Document type: Journal article (JA)

Publisher: American Institute of Physics, 2 Huntington Quadrangle, Suite N101, Melville, NY 11747-4502, United States

Abstract: An improved method is proposed to measure the jitter time of the photoconductive semiconductor switches (PCSSs). A one-to-two fiber is utilized to separate and guide the 1053 nm laser beam to trigger two identical 3-mm-gap GaAs PCSSs synchronously. The jitter time is derived from the time lags of two switches turn-on by the error transfer theory. At a bias voltage of 1 kV, the jitter time is measured as 14.41 ps, which is the lowest jitter of GaAs PCSS that has been reported so far. © 2013 AIP Publishing LLC.

Number of references: 15

Main heading: Time switches

Controlled terms: Gallium arsenide - Jitter - Optical fibers - Photoconductive switches - Semiconducting gallium

Uncontrolled terms: 1053 nm - Accurate measurement - GaAs - Jitter-time - Photoconductive semiconductor switches - Time lag

Classification code: 741.1.2 Fiber Optics - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 804 Chemical Products Generally - 716 Telecommunication; Radar, Radio and Television - 714.2 Semiconductor Devices and Integrated Circuits - 712.1.1 Single Element Semiconducting Materials - 715 Electronic Equipment, General Purpose and Industrial

DOI: 10.1063/1.4802755

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20132016337961

Title: Single-channel color image encryption based on iterative fractional Fourier transform

Authors: Sui, Liansheng¹ ; Gao, Bo¹/隋连升;高博

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

Source title: Proceedings of the 2012 4th International Symposium on Information Science and Engineering, ISISE 2012

Abbreviated source title: Proc. Int. Symp. Inf. Sci. Eng., ISISE

Monograph title: Proceedings of the 2012 4th International Symposium on Information Science and Engineering, ISISE 2012

Issue date: 2012

Publication year: 2012

Pages: 287-291

Article number: 6495348

Language: English

ISBN-13: 9780769549514

Document type: Conference article (CA)

Conference name: 2012 4th International Symposium on Information Science and Engineering, ISISE 2012

Conference date: December 14, 2012 - December 16, 2012

Conference location: Shanghai, China

Conference code: 96852

Sponsor: Shanghai Institute of Electronics; Shanghai Jiaotong University; Fudan University; Peoples' Friendship University of Russia; Feng Chia University

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: A single-channel color image encryption is proposed based on iterative fractional Fourier transform. The color image to be encrypted is first separated into three independent channels: red, green and blue. Then, the red and green components are encrypted into a single one based on iterative fractional Fourier transform. Similarly, the interim image and blue component are encrypted into the final gray scale ciphertext with stationary white noise distribution, which has camouflage property to some extent. In the process of encryption and decryption, three different groups of fractional orders, five private phase functions and one common phase function are used as keys to enhance the security of the proposed system. Additionally, the proposed iterative fractional Fourier transform algorithm has faster convergent speed. Simulation results verify the feasibility and effectiveness of this method. © 2012 IEEE.

Number of references: 21

Main heading: Cryptography

Controlled terms: Image processing - Information science - Iterative methods - White noise

Uncontrolled terms: Color image encryptions - Convergent speed - Encryption and decryption - Fractional Fourier transforms - Independent channels - Noise distribution - Red , green and blues - Single-channel

Classification code: 903 Information Science - 741 Light, Optics and Optical Devices -

723 Computer Software, Data Handling and Applications - 921.6 Numerical Methods - 718 Telephone Systems and Related Technologies; Line Communications - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves - 717 Optical Communication
DOI: 10.1109/ISISE.2012.72

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132016329377

Title: Degradation of levofloxacin by sonolysis-assisted H₂O₂ in aqueous solution

Authors: Wei, Hong¹; Li, Juan¹; Li, Ke-Bin²; Hu, Da¹/魏红;李娟;李克斌;胡妲

Author affiliation: 1 Key Laboratory of Northwest Water Resources, Environment and Ecology, Ministry of Education, Xi'an University of Technology, Xi'an 710048, China

2 Key Laboratory of Synthetic and Natural Functional Molecule Chemistry of Ministry of Education, School of Chemistry and Material Science, Northwest University, Xi'an 710069, China

Corresponding author: Wei, H. (weihong0921@163.com)

Source title: Zhongguo Huanjing Kexue/China Environmental Science

Abbreviated source title: Zhongguo Huanjing Kexue

Volume: 33

Issue: 2

Issue date: February 2013

Publication year: 2013

Pages: 257-262

Language: Chinese

ISSN: 10006923

CODEN: ZHKEEI

Document type: Journal article (JA)

Publisher: Editorial Board of China Environmental Science, No.54 Hongliannancun, Haidian District, Beijing, 100082, China

Abstract: An ultrasonic/H₂O₂ system was used to degrade levofloxacin, and some influencing factors such as H₂O₂ concentration, ultrasonic power and initial pH value were investigated. The results indicated that the ultrasonic/H₂O₂ system had a marked synergetic effect in the removal rate of levofloxacin compared with the single ultrasonic and the oxidation of H₂O₂. The degradation rate of levofloxacin increased with the increase of H₂O₂ concentration in the range of 3.0-20.0 mmol/L, and an ultrasonic power of 260 W could result into the optimum degradation rate. The degradation amount of levofloxacin increased with the increase of its initial concentration. The degradation rate of levofloxacin could reach a maximum value at initial pH 7.14 of the unbuffered solution. The high performance liquid chromatography spectrum results showed that two main products were generated during the reaction, however, which were dependent on the pH value of the solution.

Number of references: 23

Main heading: pH

Controlled terms: Degradation - High performance liquid chromatography - Hydrogen peroxide - Ultrasonics

Uncontrolled terms: Degradation rate - HPLC spectrum - Initial concentration - Initial pH value - Levofloxacin - pH value - Synergetic effect - Ultrasonic power
Classification code: 753.1 Ultrasonic Waves - 801 Chemistry - 801.1 Chemistry, General - 802.2 Chemical Reactions - 804.2 Inorganic Compounds
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132016340694

Title: Characterization of the lattice mismatched In_{0.68}Ga_{0.32}As Material Grown on InP substrate by MOCVD

Authors: Zhu, Ya-Qi^{1, 2}; Chen, Zhi-Ming¹; Lu, Shu-Long²; Ji, Lian²; Zhao, Yong-Ming²; Tan, Ming^{1, 2}/朱亚旗;陈治明;陆书龙;季莲;赵勇明;谭明

Author affiliation: 1 Automation and Information Engineering Institute, Xi'an University of Technology, Xi'an 710054, China

2 Suzhou Institute of Nano-Tech. and Nano-Bionics, Nano Devices FLOTU, Suzhou 215125, China

Corresponding author: Zhu, Y.-Q. (zhuyaqi781@163.com)

Source title: Hongwai Yu Haomibo Xuebao/Journal of Infrared and Millimeter Waves

Abbreviated source title: Hongwai Yu Haomibo Xuebao

Volume: 32

Issue: 2

Issue date: April 2013

Publication year: 2013

Pages: 118-121

Language: Chinese

ISSN: 10019014

CODEN: HHXUEZ

Document type: Journal article (JA)

Publisher: Chinese Optical Society, 420 Zhong Shan Bei Yi Road, Shanghai, 200083, China

Abstract: The lattice mismatched In_{0.68}Ga_{0.32}As materials were grown on InP substrate by MOCVD technology. InAs_xP_{1-x} metamorphic buffer layer structures with various As compositions were grown on InP substrates, which forms an alternative tension and strain offset buffer structure, In this way, we got a strain relaxed InAs_xP_{1-x} "virtual" substrate, which is lattice matched to In_{0.68}Ga_{0.32}As. With an optimized thickness of the buffer layer, the strain was completely relaxed in the "virtual" substrate. The analysis of AFM, HRXRD, TEM and photoluminescence(PL) indicated that this method can effectively improve the quality of the In_{0.68}Ga_{0.32}As material.

Number of references: 13

Main heading: Gallium alloys

Controlled terms: Gallium - Strain relaxation - Substrates

Uncontrolled terms: Buffer structures - HRXRD - InAs - InP substrates -

Lattice-matched - Lattice-mismatched - Metamorphic buffer layer - Strain-relaxed

Classification code: 461 Bioengineering and Biology - 549.3 Nonferrous Metals and Alloys

excluding Alkali and Alkaline Earth Metals - 801 Chemistry - 933.1 Crystalline Solids

DOI: 10.3724/SP.J.1010.2013.00118

Database: Compendex

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20130601 新增 3 条

1.

Accession number: 20132116352554

Title: A two-stage method for haze removal with a single image

Authors: Shi, Zhenghao¹ ; Yang, Huandi¹ ; Zhao, Minghua¹ ; Wang, Yinghui¹ ; He, Lifeng²/石争浩;;赵明华;王映辉;何立峰

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, No. 5, South Jinhua Road, Xi'an 710048, China

2 School of Information Science and Technology, Aichi Prefectural University, 1522-3 Ibaragabasama, Nagakute, Aichi 480-1198, Japan

Corresponding author: Shi, Z. (ylshi@xaut.edu.cn)

Source title: ICIC Express Letters

Abbreviated source title: ICIC Express Lett.

Volume: 7

Issue: 8

Issue date: 2013

Publication year: 2013

Pages: 2429-2435

Language: English

ISSN: 1881803X

Document type: Journal article (JA)

Publisher: ICIC Express Letters Office, Tokai University, Kumamoto Campus, 9-1-1, Toroku, Kumamoto, 862-8652, Japan

Abstract: Dark channel prior, proposed by He, is one of the most successful haze removal methods with a single image in recent years. However, the method may suffer invalidity when the scene object is inherently similar to the air light over a large local region. To address this issue, in this paper, a two-stage method for haze removal with a single image by combining dark channel prior with local histogram equalization is proposed. Firstly, a hazed image is dehazed based on dark channel prior. Then, to overcome misestimate for regions similar to the atmospheric light, the image is transformed from RGB to YCbCr color space, and then local histogram equalization is done on the luminance component. The proposed method is tested with images under different haze conditions. Experimental results show that the proposed method can effectively remove haze from a hazed image. © 2013 ICIC International.

Number of references: 12

Main heading: Face recognition

Controlled terms: Graphic methods

Uncontrolled terms: Dark channel priors - Haze removal - Local histogram equalizations

- Luminance component - Scene object - Single images - Two-stage methods -
Ycbcr color spaces

Classification code: 716 Telecommunication; Radar, Radio and Television - 902.1

Engineering Graphics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132116346318

Title: Wireless communication with chaos

Authors: Ren, Hai-Peng^{1, 2} ; Baptista, Murilo S.² ; Grebogi, Celso^{2, 3}/任海鹏;;

Author affiliation: 1 Department of Information and Control Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Institute for Complex System and Mathematical Biology, SUPA, University of Aberdeen, Aberdeen AB24 3UE, United Kingdom

3 Freiburg Institute for Advanced Studies, Freiburg University, 79104 Freiburg, Germany

Corresponding author: Ren, H.-P.

Source title: Physical Review Letters

Abbreviated source title: Phys Rev Lett

Volume: 110

Issue: 18

Issue date: April 29, 2013

Publication year: 2013

Article number: 184101

Language: English

ISSN: 00319007

E-ISSN: 10797114

CODEN: PRLTAO

Document type: Journal article (JA)

Publisher: American Physical Society, One Physics Ellipse, College Park, MD 20740-3844, United States

Abstract: The modern world fully relies on wireless communication. Because of intrinsic physical constraints of the wireless physical media (multipath, damping, and filtering), signals carrying information are strongly modified, preventing information from being transmitted with a high bit rate. We show that, though a chaotic signal is strongly modified by the wireless physical media, its Lyapunov exponents remain unaltered, suggesting that the information transmitted is not modified by the channel. For some particular chaotic signals, we have indeed proved that the dynamic description of both the transmitted and the received signals is identical and shown that the capacity of the chaos-based wireless channel is unaffected by the multipath propagation of the physical media. These physical properties of chaotic signals warrant an effective chaos-based wireless communication system. © 2013 American Physical Society.

Number of references: 37

Main heading: Information filtering

Controlled terms: Communication systems - Lyapunov methods - Wireless

telecommunication systems

Uncontrolled terms: Chaotic signal - High bit rates - Lyapunov exponent - Physical constraints - Received signals - Wireless channel - Wireless communication system - Wireless communications

Classification code: 716 Telecommunication; Radar, Radio and Television - 903.1

Information Sources and Analysis - 921 Mathematics - 961 Systems Science

DOI: 10.1103/PhysRevLett.110.184101

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132116349933

Title: Research based on labview on wind turbine monitoring system

Authors: Ma, Chenyuan¹ ; Zhao, Daoli¹ ; Wan, Tianhu¹ ; Wu, Luochang¹ ; Li, Yanfeng¹/马晨原; 赵道利; 万天虎; 吴罗长; 李衍峰;

Author affiliation: 1 Laboratory of Fluid Mechanics Research, Xi'an University of Technology, Beilin District, Xi'an 710048, China

Source title: IET Conference Publications

Abbreviated source title: IET Conf Publ

Volume: 2012

Issue: 611 CP

Monograph title: International Conference on Sustainable Power Generation and Supply, SUPERGEN 2012

Issue date: 2012

Publication year: 2012

Article number: 1787

Language: English

ISBN-13: 9781849196734

Document type: Conference article (CA)

Conference name: International Conference on Sustainable Power Generation and Supply, SUPERGEN 2012

Conference date: September 8, 2012 - September 9, 2012

Conference location: Hangzhou, China

Conference code: 96929

Publisher: Institution of Engineering and Technology, Six Hills Way, Stevenage, SG1 2AY, United Kingdom

Abstract: With the increased concern about energy shortage and advances in technology, wind power comes to become an important issue in various countries. The wind turbine working condition is relatively complex than general mechanical condition. In variable working condition, wind turbine and system is easy to be made plastic deformation and generate additional structure stress by inertia force function. The wind turbine monitoring system is able to give the equipment running status report for forecasting warning before the damage of wind generator parts (gear, axle, bearing), to ensure condition monitoring and defects alarming. In this paper, a wind turbine generator monitoring and analysis system is developed. The system structure, function and arrangement of measuring points are discussed in detail. The simulation shows that

operational status of the wind turbine generators can be judged the system the, displaying a large number of real-time data, meanwhile can pre-alarm and other functions with the SQL into the database.

Number of references: 4

Main heading: Wind turbines

Controlled terms: Condition monitoring - Turbogenerators - Wind power

Uncontrolled terms: Additional structures - Equipment running - LabVIEW -

Measuring points - Monitoring and analysis - Monitoring system - System structures
- Wind generator systems

Classification code: 603 Machine Tools - 615.8 Wind Power (Before 1993, use code 611) -
705.2 Electric Generators - 706 Electric Transmission and Distribution

DOI: 10.1049/cp.2012.1787

Database: Compendex

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20130607 新增 6 条

1.

Accession number: 20132116362799

Title: Effects of wettability and pore size uniformity of the channel on infiltration process of liquid copper in W skeleton

Authors: Bai, Yanxia1, 2 ; Liang, Shuhua1/白艳霞;梁淑华

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

2 Yulin University, Yulin 719000, China

Corresponding author: Liang, S. (liangsh@xaut.edu.cn)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 730-735

Language: Chinese

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: A micro-scale W skeleton porous model was built by random Voronoi segments, and the infiltration process of CuW alloy was then simulated using a finite volume method based on the Navier-Stokes momentum equation modified by Young-Laplace. The simulation results show that improving the wettability of Cu-W can accelerate the velocity in the center of copper flow and strengthen the adhesion of liquid copper to the wall of W skeleton, resulting in the

mechanical combination at the interface of Cu-W. Moreover, the transition of reaming and shrinkage due to the ununiform pore size can produce whirlpools of copper liquid in the pores, resulting in pores in the CuW alloy, and thus the filling rate of copper liquid is decreased.

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Number of references: 19

Main heading: Liquids

Controlled terms: Alloys - Copper - Finite volume method - Infiltration - Laplace equation - Musculoskeletal system - Navier Stokes equations - Pore size - Tungsten - Wetting

Uncontrolled terms: Filling rate - Infiltration process - Liquid copper - Micro-scales - Momentum equation - Navier Stokes - Size uniformity - Young-Laplace

Classification code: 921.6 Numerical Methods - 921.2 Calculus - 544.1 Copper - 931.2 Physical Properties of Gases, Liquids and Solids - 543.5 Tungsten and Alloys - 461.3 Biomechanics, Bionics and Biomimetics - 452.1 Sewage - 531.1 Metallurgy

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132116362849

Title: Interpolation method for lidar data visualization based on cubic spline function

Authors: Chen, Hao1 ; Hua, Dengxin1 ; Zhang, Yikun2 ; Yan, Qing1 ; Li, Shichun1/; 华灯鑫; 张毅坤; ; 李仕春

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Chen, H. (haozi2638@163.com)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 831-837

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Traditional visualization software and method can not accurately describe the details of atmospheric parameters under the influence of atmospheric turbulence and boundary layer, and it is difficult to show the continuous varying process of atmospheric parameters. This study

puts forward a new interpolation method for lidar data visualization based on cubic spline function. Firstly, the discrete characteristics of the lidar data are analyzed, and the key factors that influence lidar data visualization graphics are determined. Secondly, based on the mutual influence of the observation data in a certain atmosphere range, the interpolated data are revised according to the observation data around the interpolation points, and the varying tendency of lidar data is fitted with cubic spline function. The experimental results show that the proposed method can improve the interpolation accuracy of discrete lidar data and the smoothness of visualization graphics, which provides a strong means for lidar data analysis.

Number of references: 16

Main heading: Data visualization

Controlled terms: Atmospheric turbulence - Interpolation - Optical radar - Visualization

Uncontrolled terms: Atmospheric parameters - Cubic spline functions - Data interpolation - Data revision - Interpolation method - Interpolation points - LIDAR data - Visualization software

Classification code: 443.1 Atmospheric Properties - 716.2 Radar Systems and Equipment - 902.1 Engineering Graphics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory - 921.6 Numerical Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132216374185

Title: Multi-feature structure fusion of contours for unsupervised shape classification

Authors: Lin, Guangfeng¹; Zhu, Hong²; Kang, Xiaobing¹; Fan, Caixia¹; Zhang, Erhu¹/蔺广逢; 朱虹;; 范彩霞; 张二虎

Author affiliation: 1 Department of Information Science, Xi'an University of Technology, 5 South Jinhua Road, Xi'an, Xi'an Shaanxi Province 710048, China

2 Faculty of Automation and Information Engineering, Xi'an University of Technology, 5 South Jinhua Road, Xi'an, Xi'an Shaanxi Province 710048, China

Corresponding author: Lin, G. (lgf78103@126.com)

Source title: Pattern Recognition Letters

Abbreviated source title: Pattern Recogn. Lett.

Volume: 34

Issue: 11

Issue date: 2013

Publication year: 2013

Pages: 1286-1290

Language: English

ISSN: 01678655

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Nonlinear distortion, especially structure distortion, is one of the main reasons for the poor performance of shape contour classification. The structure fusion of multiple features

provides a new solution for the structure distortion. How is this structure fusion performed? To answer the question, in this letter, the multi-feature of a contour is defined. Second, the structure of each feature is measured by similarity. Then, the fusion structure is obtained using the algebraic operation of the respective structure, the specific form of which is deduced based on locality-preserving projection (LPP). Finally, the combined feature is mapped into the new structure-fusion feature in terms of the fusion structure. The experiment demonstrates that this structure fusion method is superior to other state-of-the-art methods that address geometrical transformations and nonlinear distortion for classification in Kimia or MPEG-7 datasets. © 2013 Published by Elsevier B.V. All rights reserved.

Number of references: 19

Main heading: Classification (of information)

Controlled terms: Distortion (waves) - Motion Picture Experts Group standards -

Nonlinear distortion

Uncontrolled terms: Algebraic operations - Geometrical transformation - Multi features - Shape classification - Shape contours - State-of-the-art methods - Structure distortions - Unsupervised shape

Classification code: 716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing

DOI: 10.1016/j.patrec.2013.04.011

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132216378692

Title: Recognition of cyclostationary signals smoothed

Authors: Liu, Gaohui¹ ; Zhang, Zhiping¹ ; Yang, Yuan¹/刘高辉;张志平;杨媛

Author affiliation: 1 School of Automation and Information, Xi'an University of Technology, Xi'an, China

Source title: Proceedings of the 2012 National Conference on Information Technology and Computer Science, CITCS 2012

Abbreviated source title: Proc. Natl. Conf. Inf. Technol. Comput. Sci., CITCS

Monograph title: Proceedings of the 2012 National Conference on Information Technology and Computer Science, CITCS 2012

Issue date: 2012

Publication year: 2012

Pages: 165-169

Language: English

ISBN-13: 9789491216381

Document type: Conference article (CA)

Conference name: 2012 National Conference on Information Technology and Computer Science, CITCS 2012

Conference date: November 16, 2012 - November 18, 2012

Conference location: Lanzhou, China

Conference code: 97073

Sponsor: Henan University; Yanshan University; Wenzhou University; Jiangsu University of

Science and Technology; Xi'an University of Science and Technology

Publisher: Atlantis Press, 29 avenue Laumiere, Paris, 75019, France

Abstract: In the identification process of modulated signal based cyclic spectrum, it is chief to be synchronized for the received signal. The article focuses on the reception signal which is not synchronized. When uniform distribution variable delay exists, it will not have cyclostationary, namely it is converted into a stable signal, which limits the usable range of cyclic spectrum identifying signals. Meanwhile, in this situation, through extracting characteristic parameters, simulation shows that the method is perfect for modulation identification under the condition that SNR is 0-50dB. © 2012. The authors - Published by Atlantis Press.

Number of references: 8

Main heading: Information technology

Controlled terms: Computer science - Timing jitter

Uncontrolled terms: Characteristic parameter - Cyclo-stationary signals -

Cyclostationarity - Identification process - Modulated signal - Modulation identification - Reception signals - Uniform distribution

Classification code: 903 Information Science - 723 Computer Software, Data Handling and Applications - 722 Computer Systems and Equipment - 721 Computer Circuits and Logic Elements - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132116362582

Title: Central composite design test based process parameters optimizing for compound machining with ultrasonic vibration on SiC wafer

Authors: Liu, Yong¹ ; Li, Shujuan¹ ; Li, Yan¹ ; Kong, Lingfei¹ ; Wan, Bo¹/刘勇;李淑娟;李言;孔令飞;万博

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liu, Y. (liuyong@xaut.edu.cn)

Source title: Jixie Gongcheng Xuebao/Journal of Mechanical Engineering

Abbreviated source title: Jixie Gongcheng Xuebao

Volume: 49

Issue: 7

Issue date: April 5, 2013

Publication year: 2013

Pages: 193-198

Language: Chinese

ISSN: 05776686

CODEN: CHHKA2

Document type: Journal article (JA)

Publisher: Editorial Office of Chinese Journal of Mechanical, 22 Baiwanzhuang Dajie, Beijing, 100037, China

Abstract: Since it is difficult for ultrasonic vibration compound machining to get effective cutting mechanism mathematical model through dynamic analysis, and experimental study is shown an effective method to solve this problem, following researches by means of central composite design(CCD) testing are carried out. 4-factor and 3-level SiC wafer ultrasonic vibration compound machining test scheme is designed, and then second-order relational model is established between tangential cutting force, surface roughness, and their main process parameters (wire saw speed, workpiece feed rate, rotational speed, and ultrasonic amplitude) by using response surface methodology. According to multiple quadratic fitting of testing data, quadratic equation of cutting force and surface roughness is obtained. Constrains of actual machining condition upon the parameters are analyzed further. With the goal of improving surface quality (minimized surface roughness) of SiC wafer, the parameters optimization model is established. Particle swarm optimization algorithm and its procedure are designed to solve the model. Test proves that the algorithm could achieve optimized process parameters which satisfy multiple constraints rapidly and effectively. © 2013 Journal of Mechanical Engineering.

Number of references: 12

Main heading: Ultrasonic waves

Controlled terms: Algorithms - Design - Mathematical models - Particle swarm optimization (PSO) - Silicon carbide - Surface properties - Surface roughness - Ultrasonic effects

Uncontrolled terms: Central composite designs - Parameters optimization - Particle swarm optimization algorithm - Process parameters - Response surface methodology - SiC wafer - Tangential cutting force - Ultrasonic vibration

Classification code: 408 Structural Design - 723 Computer Software, Data Handling and Applications - 753.1 Ultrasonic Waves - 804.2 Inorganic Compounds - 921 Mathematics - 931.2 Physical Properties of Gases, Liquids and Solids

DOI: 10.3901/JME.2013.07.193

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132116362860

Title: Design of a multi-frequency synchronized signal excitation current source

Authors: Yang, Yuxiang¹ ; Qiao, Yang¹/杨宇祥;

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yang, Y. (yangyuxiang@xaut.edu.cn)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 908-913

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: The excitation current source in bioimpedance spectroscopy (BIS) multi-frequency synchronized fast measurement system must meet the special requirements of wide frequency spectrum range, homogeneously distributed spectrum energy, synchronous phase and high output impedance. This paper designs a periodical and two-valued nine-frequency synchronized signal $f(9, t)$ based on Walsh functions. $f(9, t)$ includes nine primary harmonics at 1st, 2nd, 4th, 8th, 16th, 32nd, 64th, 128th and 256th harmonics, which have synchronous phase, homogeneously distributed spectrum energy and 65.52% of the total average power of the signal. The field programmable gate array (FPGA) implementation method of $f(9, t)$ and the driving circuit design of the voltage-controlled current source (VCCS) are introduced. Load experiments were performed and the results show that the theoretical simulation voltage waveform and the real experiment voltage waveform on the VCCS load are highly consistent, and the VCCS has fairly high output impedance. This paper establishes an ideal multi-frequency synchronized signal excitation current source and lays a foundation for the multi-frequency synchronous fast measurement of BIS.

Number of references: 15

Main heading: Electric converters

Controlled terms: Electric impedance - Experiments - Field programmable gate arrays (FPGA) - Synchronization - Walsh transforms

Uncontrolled terms: Bio-Impedance spectroscopies - Current sources - Driving circuit designs - Excitation currents - Field-programmable gate array implementations - Multi frequency - Theoretical simulation - Voltage-controlled

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 704.2 Electric Equipment - 721.3 Computer Circuits - 901.3 Engineering Research - 921.3

Mathematical Transformations - 961 Systems Science

Database: Compendex

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20130621 新增 11 条

1.

Accession number: 20132216387781

Title: Investigation on the correction of the Mie scattering lidar's overlapping factor and echo signals over the total detection range

Authors: Di, Hui-Ge¹; Hua, Deng-Xin¹; Wang, Yu-Feng¹; Yan, Qing¹/狄慧鸽;华灯鑫;王玉峰;闫庆

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Di, H.-G. (dihuige@163.com)

Source title: Wuli Xuebao/Acta Physica Sinica

Abbreviated source title: Wuli Xuebao

Volume: 62

Issue: 9

Issue date: May 5, 2013

Publication year: 2013

Article number: 094215

Language: Chinese

ISSN: 10003290

CODEN: WLHPAR

Document type: Journal article (JA)

Publisher: Institute of Physics, Chinese Academy of Sciences, P.O. Box 603, Beijing, 100190, China

Abstract: There has been great difference between the theoretical signals of the lidar's echo and its actual signals, due to the angles between the laser beam and its receiving optical axis, and the laser intensity distribution being asymmetrical. So the correction of the echo signal is necessary. According to the mathematical derivation and the software simulation, the mathematical expression of the lidar's overlap factor is given, and the overlap factor curves with detection range are drawn which express the characters over the total detection range, then the best angle between lidar's emitting axis and the receiving axis is obtained. The overlap factors are analyzed when the laser is Gaussian with a uniform intensity distribution. The lidar distance correction signal and Klett formula are corrected by the overlap factor, and the instrument parameters of the lidar are measured. In the range where the overlap factor is not zero, its correction echo signals and extinction coefficients can be obtained by using the corrected Klett formula. While in the range of the lidar's blind zone, the signals can be derived by a slope method. Finally, the total correction curve of the extinction coefficients is gained, and it is in accordance with the actual one correction curve. © 2013 Chinese Physical Society.

Number of references: 9

Main heading: Signal detection

Controlled terms: Computer software - Electric power factor correction - Optical radar

Uncontrolled terms: Distance corrections - Extinction coefficients - Laser intensity distribution - Mathematical derivation - Mathematical expressions - Mie-scattering lidar - Overlap factor - Software simulation

Classification code: 706 Electric Transmission and Distribution - 716.1 Information Theory and Signal Processing - 716.2 Radar Systems and Equipment - 723 Computer Software, Data Handling and Applications

DOI: 10.7498/aps.62.094215

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132316401628

Title: Preparation and characterization of an asphalt-modifying agent with waste packaging polyethylene and organic montmorillonite

Authors: Fang, Changqing¹ ; Yu, Ruien^{1, 2} ; Li, Yan² ; Zhang, Mengya¹ ; Hu, Jingbo^{1, 2} ; Zhang, Min¹/方长青;于瑞恩;李言;张梦雅;胡京博;张敏

Author affiliation: 1 College of Printing and Packing Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

2 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

Corresponding author: Fang, C. (fcqxaut@163.com)

Source title: Polymer Testing

Abbreviated source title: Polym Test

Volume: 32

Issue: 5

Issue date: 2013

Publication year: 2013

Pages: 953-960

Language: English

ISSN: 01429418

CODEN: POTEDZ

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: In this paper, waste packaging polyethylene (WPE)/organic montmorillonite (OMMT) nanocomposites were prepared and used as an asphalt-modifying agent. The structure and morphology of the nanocomposites and the effects of OMMT on the thermal properties of WPE were investigated. The influence of the microcosmic effects and physical properties of the composite agents on the base asphalt were also studied. The results show that the WPE/OMMT asphalt-modifying agents are exfoliated nanocomposites. When compared with WPE, the melting range of the composites decreases and the thermal stability is improved. In addition, the composite agents not only promote good dispersion of WPE in asphalt, but also improve the low temperature properties of WPE-modified asphalt without adversely affecting its excellent high temperature properties. Therefore, from an environmental and economic standpoint, it is a novel and significant attempt at dealing with waste plastics packaging. © 2013 Elsevier Ltd. All rights reserved.

Number of references: 23

Main heading: Asphalt

Controlled terms: Clay minerals - Coextrusion - Nanocomposites - Packaging - Polyethylenes

Uncontrolled terms: Economic standpoints - Exfoliated nanocomposites - Melting range - Modification - Organic montmorillonite - Packaging - polyethylenes - Structure and morphology - Waste plastic

Classification code: 933 Solid State Physics - 816.1 Processing of Plastics and Other Polymers - 815.1.1 Organic Polymers - 761 Nanotechnology - 694.1 Packaging, General - 482.2 Minerals - 411.1 Asphalt

DOI: 10.1016/j.polymertesting.2013.04.006

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132316394582

Title: Synthesis and field-emission properties of oriented GaN nanowires

Authors: Li, Enling¹ ; Cheng, Xuhui¹ ; Zhao, Danna¹ ; Xu, Rui¹ ; Xi, Meng¹ ; Cui, Zhen¹ ; Zhao, Tao¹/李恩玲;;赵丹娜;;;崔真;赵涛

Author affiliation: 1 Xi'an University of Technology, Science School, 710048, Xi'an, China

Corresponding author: Li, E. (Lienling@xaut.edu.cn)

Source title: Micro and Nano Letters

Abbreviated source title: Micro. Nano. Lett.

Volume: 7

Issue: 12

Issue date: December 2012

Publication year: 2012

Pages: 1305-1307

Language: English

E-ISSN: 17500443

Document type: Journal article (JA)

Publisher: Institution of Engineering and Technology, Six Hills Way, Stevenage, SG1 2AY, United Kingdom

Abstract: Oriented gallium nitride (GaN) nanowires grown on Pt-coated Si (1 1 1) substrates, were synthesised using the chemical vapour deposition method under different Ga sources. The characteristics of the grown GaN nanowires were investigated using scanning electron microscopy and X-ray diffraction, which found that the as-synthesised GaN nanowires of the three samples are of different orientation, and all displayed hexagonal wurtzite structures of GaN crystals. The electron field-emission properties of the three samples of GaN nanowires showed a low turn-on field of 4.5, 5.5 and 6.2 V/m, respectively, and field enhancement factors of 1337, 2948 and 2599, respectively. © 2012 The Institution of Engineering and Technology.

Number of references: 18

Main heading: Gallium nitride

Controlled terms: Chemical vapor deposition - Gallium alloys - Nanowires - Scanning electron microscopy - Single crystals - X ray diffraction - Zinc sulfide

Uncontrolled terms: Chemical vapour deposition - Electron field emission - Field enhancement factor - Field-emission properties - Gallium nitride nanowires - GaN nanowires - Hexagonal wurtzite structure - Turn-on field

Classification code: 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 741.1 Light/Optics - 761 Nanotechnology - 802.2 Chemical Reactions - 804.2 Inorganic Compounds - 933 Solid State Physics

DOI: 10.1049/mnl.2012.0829

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132316393855

Title: Two-diode model analysis and experimental verification for photovoltaic cells
 Authors: Shang, Ersong¹ ; An, Tao¹;安涛
 Author affiliation: 1 Xi'an University of Technology, Xi'an, Shaanxi, 710048, China
 Source title: Advanced Materials Research
 Abbreviated source title: Adv. Mater. Res.
 Volume: 684
 Monograph title: Advances in Applied Materials and Electronics Engineering II
 Issue date: 2013
 Publication year: 2013
 Pages: 269-273
 Language: English
 ISSN: 10226680
 ISBN-13: 9783037856680
 Document type: Conference article (CA)
 Conference name: 2nd International Conference on Applied Materials and Electronics Engineering, AMEE 2013
 Conference date: April 19, 2013 - April 20, 2013
 Conference location: Hong Kong, China
 Conference code: 97095
 Sponsor: International Science and Engineering Research Center; International Association for Scientific and High Technology
 Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
 Abstract: This paper analyzed a kind of two-diode model and reasonably simplified the mathematical calculation process under different irradiance, proposing a method which can use maximum power point to calculate simultaneously series and parallel resistance. Two kinds of PV modules should be tested in order to validating the accuracy of the proposed method. It is calculated that the relative error of single diode model is 1.72% and the two-diode model is 0.45%. The result shows that more accuracy can be performed for two-diode model in reflecting the output characteristics of photovoltaic cells. © (2013) Trans Tech Publications, Switzerland.
 Number of references: 5
 Main heading: Diodes
 Controlled terms: Electronics engineering - Mathematical models - Photoelectrochemical cells - Photovoltaic cells
 Uncontrolled terms: Experimental verification - Mathematical calculations - Maximum power point - Output characteristics - Parallel resistance - Reasonable simplified - Single-diode models - Two-diode model
 Classification code: 741.3 Optical Devices and Systems - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 921 Mathematics - 716 Telecommunication; Radar, Radio and Television - 714 Electronic Components and Tubes - 713 Electronic Circuits - 715 Electronic Equipment, General Purpose and Industrial
 DOI: 10.4028/www.scientific.net/AMR.684.269
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132316388924

Title: Effects of perennial vegetation on runoff and erosion for field plots on loess plateau in china

Authors: Tiegang, Zhang¹ ; Li, Peng¹ ; Li, Zhanbin² ; Guo, Xiaoding³;;李鹏;李占斌;;

Author affiliation: 1 Key Lab of Northwest Water Resources, Environment Ecology of MOE, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China

2 Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Education, Yangling, Shaanxi, 712100, China

3 Department of Military Economy, Engineering University of CAPF, Xi'an Shaanxi, 710086, China

Source title: Nature Environment and Pollution Technology

Abbreviated source title: Nat. Environ. Pollut. Technol.

Volume: 12

Issue: 1

Issue date: March 2013

Publication year: 2013

Pages: 63-68

Language: English

ISSN: 09726268

Document type: Journal article (JA)

Publisher: Technoscience Publications, 2, Shila Apartment, Shila Nagar, Near T.V.Tower, Karad-415110, Maharastra, India

Abstract: Vegetation is one of effective methods for soil and water conservation. How to select suitable vegetation species is a key problem in the practice. In this study. through 7 years observations on the rainfall, vegetation cover, total runoff and sediment in the plots, results indicated that the benefit of the vegetative cover on runoff and sediment dominated on all plots. The accumulative sediment yield from bare plot was 7 times to that from *Astragalus absurgens* ± *Caragana korshinskii* plots, also over 4 times to that from the *Medicago sativa*, *Medicago sativa* ± *Caragana korshinskii* and *Astragalus absurgens* plots. Among all the vegetation types, *Caragana korshinskii* was the most efficient in reducing the runoff, and the combination of shrub and grass also had better effect in reducing the runoff. The accumulative runoff from bare plot was 2.57 times to that from the *C. korshinskii*, and over 2 times to that from *M. sativa*, *M. sativa* ± *C. korshinskii*, *A. absurgens* ± *C. korshinskii* and *Vicia amucena* ± *C. korshinskii*. This study is of great importance for the selection of suitable species for vegetation reconstruction in arid and semi-Arid areas.

Number of references: 26

Main heading: Vegetation

Controlled terms: Arid regions - Erosion - Landforms - Runoff - Sedimentology - Sediments - Water conservation

Uncontrolled terms: Arid and semi-arid areas - Loess Plateau - Runoff and sediments - Shrubs and grasses - Soil and water conservation - Vegetation cover - Vegetation coverage - Vegetation species

Classification code: 443 Meteorology - 444 Water Resources - 444.1 Surface Water -

481.1 Geology - 483 Soil Mechanics and Foundations - 821 Agricultural Equipment and Methods; Vegetation and Pest Control

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132316388949

Title: Experimental study on water use efficiency of winter wheat in different irrigation methods

Authors: Wang, Shun Sheng¹ ; Fei, Liang Jun² ; Gao, Chuan Chang¹/王顺生;费良军;;

Author affiliation: 1 North China University of Water Conservancy and Hydroelectric Power, Zhengzhou, 450011, China

2 Institute of Water Resources, Xi'an University of Technology, Xi'an, 710048, China

Source title: Nature Environment and Pollution Technology

Abbreviated source title: Nat. Environ. Pollut. Technol.

Volume: 12

Issue: 1

Issue date: March 2013

Publication year: 2013

Pages: 183-186

Language: English

ISSN: 09726268

Document type: Journal article (JA)

Publisher: Technoscience Publications, 2, Shila Apartment, Shila Nagar, Near T.V.Tower, Karad-415110, Maharastra, India

Abstract: In order to probe dry matter accumulation, grain yield and water use efficiency of winter wheat, the study has been conducted under three irrigation treatments by the different irrigation methods. The results show that winter wheat water consumption and the ground dry matter accumulation gradually increase under the different irrigation conditions, with the increase in the number of irrigations, while yield and water use efficiency increase at first and then decrease. Under the same irrigation times, the water consumption of winter wheat in bed-planting is lower than that in flat planting, and dry matter accumulation is higher than that of flat planting. Compared with the flat planting, the water quantity of bed-planting can be saved 40%, the production can increase by 5.5% to 11.3%, and water use efficiency can increase by 0.17 to 0.40kg/m³. On the basis of the experimental results, it is suggested that the bed-planting mode in combination with considerably deficit irrigation at winter, jointing and booting stages is worth extending the application in winter wheat production.

Number of references: 6

Main heading: Water supply

Controlled terms: Crops - Efficiency - Irrigation - Water management

Uncontrolled terms: Bed-planting - Dry matter accumulation - Experimental studies -

Grain yield - Irrigation methods - Irrigation treatments - Water use efficiency -

Winter wheat

Classification code: 444 Water Resources - 446 Waterworks - 446.1 Water Supply

Systems - 821.3 Agricultural Methods - 821.4 Agricultural Products - 913.1 Production Engineering

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132216387826

Title: Effect of coating alloying element on microstructure and properties of the welded joint of basic electrode

Authors: Zhang, Min¹ ; Wu, Weigang¹ ; Li, Jihong¹ ; Zhi, Jinhua^{1, 2} ; Zhang, Haicun²/张敏;吴伟刚;李继红;支金花;张海存

Author affiliation: 1 College of Material Science and Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 Xi'an Shangu Power Co., Ltd., Xi'an, 710075, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Cailiao Yanjiu Xuebao/Chinese Journal of Materials Research

Abbreviated source title: Cailiao Yanjiu Xuebao

Volume: 27

Issue: 2

Issue date: April 2013

Publication year: 2013

Pages: 113-118

Language: Chinese

ISSN: 10053093

CODEN: CYXUEV

Document type: Journal article (JA)

Publisher: Chinese Journal of Materials Research, 72 Wenhua Road, Shenyang, 110015, China

Abstract: Four basic electrodes were designed by the method of transition alloying elements through coating. The influence of coating alloying elements on microstructure and properties of basic electrode welded joints were studied by using welding test, metallurgical analysis, mechanical property testing and fracture scanning tests. The results showed that with the increase of alloying elements, the changes of four kinds of weld microstructure is small and mainly composed of tempered sorbite and lath martensite, and accompanied by a small amount of residual austenite and quadratic precipitated phase, but the microstructure gradually changed from lath to thin strips, and staggered density increases. What's more, the strength of four welded joints has a little changed, but the impact of toughness has a greatly improved and the fracture dimples became many and deep. Last, the effect of coating alloying elements on welds microstructure and properties is a complementary and mutual restraint process, and the content of alloying element in No.3 electrode makes the basic electrode weld strength and toughness to achieve a better matched.

Number of references: 18

Main heading: Alloying elements

Controlled terms: Alloying - Coatings - Fracture - Fracture testing - Fracture toughness - Martensite - Mechanical properties - Microstructure - Welding -

Welding electrodes - Welds
Uncontrolled terms: Lath-martensite - Mechanical property testing - Metallic material
- Metallurgical analysis - Microstructure and properties - Residual austenite -
Tempered-sorbite - Weld microstructures
Classification code: 933 Solid State Physics - 539 Metals Corrosion and Protection; Metal
Plating - 538.2.2 Welding Equipment - 951 Materials Science - 538.2 Welding -
531.1 Metallurgy - 421 Strength of Building Materials; Mechanical Properties - 531.2
Metallography
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132316396538

Title: Nonlinear dynamic behaviors of rotor system supported by self-acting gas-lubricated bearings with axial grooves

Authors: Zhang, Yongfang¹ ; Zhou, Shisheng¹ ; Lü, Yanjun² ; Wu, Ying³ ; Yu, Lie⁴/张永芳;周世生;吕延军;吴莹;虞烈

Author affiliation: 1 School of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an, 710048, China

3 School of Aerospace, Xi'an Jiaotong University, Xi'an, 710049, China

4 Institute of Mechatronics and Information Systems, Xi'an Jiaotong University, Xi'an, 710049, China

Corresponding author: Zhang, Y. (zyf_nwpu@126.com)

Source title: Zhendong Ceshi Yu Zhenduan/Journal of Vibration, Measurement and Diagnosis

Abbreviated source title: Zhendong Ceshi Yu Zhenduan

Volume: 33

Issue: 2

Issue date: April 2013

Publication year: 2013

Pages: 219-223

Language: Chinese

ISSN: 10046801

CODEN: ZCZHFY

Document type: Journal article (JA)

Publisher: Nanjing University of Aeronautics and Astronautics, 29 Yudao Street, Nanjing, 210016, China

Abstract: Based on the nonlinear theory, the unbalanced response behavior of the rotor dynamic system supported by gas journal bearings is investigated. A time-dependent mathematical model is established to describe the pressure distribution of gas journal bearing with nonlinearity. The rigid Jeffcott rotor with self-acting gas journal bearing supports is modeled. The differential transformation method is employed to solve the time-dependent Reynolds equation of gas bearings. The unbalanced responses of the rotor system supported by finite

width gas journal bearings with three axial grooves are analyzed by bifurcation diagram, orbit diagram, Poincaré map diagram and frequency diagram. The numerical results reveal periodic, period-doubling, period-4, period-8 and chaotic motion of nonlinear behaviors of the system.

Number of references: 10

Main heading: Gas lubricated bearings

Controlled terms: Gas bearings - Gases - Journal bearings - Mathematical models - Rigid rotors - Rotors

Uncontrolled terms: Bifurcation diagram - Differential transformation methods - Gas journal bearings - Nonlinear - Nonlinear dynamic behaviors - Rotor dynamic systems - Self-acting gas journal bearings - Time-dependent reynolds equation

Classification code: 601.2 Machine Components - 921 Mathematics - 931.2 Physical Properties of Gases, Liquids and Solids

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20132216386990

Title: A segmental calibration method for a miniature serial-link coordinate measuring machine using a compound calibration artefact

Authors: Zhou, Awei¹ ; Guo, Junjie¹ ; Shao, Wei² ; Li, Beizhan¹/周阿维;郭俊杰;邵伟;;

Author affiliation: 1 State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, Xi'an 710049, China

2 Department of Precision Instruments, Xi'an University of Technology, Xi'an 710048, China

Source title: Measurement Science and Technology

Abbreviated source title: Meas. Sci. Technol.

Volume: 24

Issue: 6

Issue date: June 2013

Publication year: 2013

Article number: 065001

Language: English

ISSN: 09570233

E-ISSN: 13616501

CODEN: MSTCEP

Document type: Journal article (JA)

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: In the application of a miniature serial-link coordinate measuring machine, it is necessary to calibrate the structural parameters and improve the positioning accuracy for accurate task performance. In this study, using a designed compound calibration artefact, a new calibration method which includes kinematic calibration and laser tool centre point (TCP) calibration is proposed. In the kinematic calibration, geometric parameters included in the kinematic model can be identified by using the constraint that the cone angle or cylinder diameter for several different positions is invariable. For the laser TCP calibration, the relative

positions between the laser sensor and the end effector are calibrated by means of the cone surface part of the calibration artefact, using the constraint that the conic node positions for several different measurements are invariable. During the calibration process, the identification of all structural parameters from measuring data can be separated furthest, so the calibration errors brought by strong correlations between all the parameters can be decreased. Moreover, the differences of different positions of end effector in calculations can be used; thus, the calibration error which is due to the positioning error of the end effector can be decreased.

Experimental results on real data have demonstrated the effectiveness of our method. © 2013 IOP Publishing Ltd.

Number of references: 27

Main heading: Calibration

Controlled terms: Cones - Coordinate measuring machines - End effectors - Kinematics - Scanning

Uncontrolled terms: Calibration method - Calibration process - Geometric parameter - Kinematic Calibration - Positioning accuracy - Relative positions - Strong correlation - Structural parameter

Classification code: 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 943.3 Special Purpose Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 941 Acoustical and Optical Measuring Instruments - 931.1 Mechanics - 741.3 Optical Devices and Systems - 731.5 Robotics - 631.1 Fluid Flow, General

DOI: 10.1088/0957-0233/24/6/065001

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20132316396460

Title: An efficient density-based clustering algorithm combined with representative set

Authors: Zhou, Hongfang¹ ; Wang, Xiao¹ ; Zhao, Xuehan¹/周红芳;王晓;;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhou, H. (zhouhf@xaut.edu.cn)

Source title: Journal of Information and Computational Science

Abbreviated source title: J. Inf. Comput. Sci.

Volume: 10

Issue: 7

Issue date: May 1, 2013

Publication year: 2013

Pages: 2021-2028

Language: English

ISSN: 15487741

Document type: Journal article (JA)

Publisher: Binary Information Press, Flat F 8th Floor, Block 3, Tanner Garden, 18 Tanner Road, Hong Kong

Abstract: Cluster analysis is a key technique of data mining and has been applied widely. The paper presents a novel clustering algorithm DCURS, which incorporates the principle of proximity and limited area into the density-based clustering method to improve clustering accuracy and stability. In addition, DCURS introduces the representative set to accelerate the running speed of the algorithm. Experimental results verify that DCURS has better performance than traditional density-based algorithms of DBSCAN and DBRS. © 2013 by Binary Information Press.

Number of references: 11

Main heading: Clustering algorithms

Controlled terms: Cluster analysis - Data mining

Uncontrolled terms: Better performance - Clustering accuracy - Density-based algorithm - Density-based Clustering - Density-based clustering algorithms - Limited area -

Representative set - The principle of proximity

Classification code: 721 Computer Circuits and Logic Elements - 723 Computer Software, Data Handling and Applications - 922 Statistical Methods

DOI: 10.12733/jics20101716

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20132316394082

Title: The impact of historical flood research on the improvement of the quality of design flood

Authors: Zhou, Jin1 ; Lv, Yisheng2/周瑾;

Author affiliation: 1 Xi'an University of Technology, China

2 North China University of Water Conservancy and Hydroelectric Power, China

Source title: WIT Transactions on the Built Environment

Abbreviated source title: WIT Trans. Built Environ.

Volume: 140

Monograph title: Advances in Civil, Transportation and Environmental Engineering

Issue date: 2013

Publication year: 2013

Pages: 483-487

Language: English

ISSN: 17433509

ISBN-13: 9781845647865

Document type: Conference article (CA)

Conference name: 2012 International Conference on Civil, Transportation and Environmental Engineering, CTEE 2012

Conference date: November 17, 2012 - November 18, 2012

Conference location: Jiangsu, China

Conference code: 97105

Sponsor: WIT Transactions on the Built Environment

Publisher: WITPress, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, United Kingdom

Abstract: The representativeness of series data is a very important factor influencing design flood quality. The research of historical flood and historical documents as well as the extension of

a flood series are important means of improving the representativeness of series data. We analyzed how to deal with the historical flood in domestic hydropower engineering and expounded the computing method of design flood in riverway treatment of the Yellow River in Ningxia. Through the comparison of the two kinds of design flood; one that has a long series with historical flood while the other only has a short series, we come to the conclusion that historical floods play an important role in improving the flood representativeness and thus the accuracy of the design flood results is improved. © 2013 WIT Press.

Number of references: 5

Main heading: Floods

Controlled terms: Design - Environmental engineering

Uncontrolled terms: Computing methods - Design flood - Historical documents - Historical floods - Hydropower engineering - Quality of design - The representativeness of series data - Yellow river

Classification code: 408 Structural Design - 454 Environmental Engineering - 914.1 Accidents and Accident Prevention

DOI: 10.2495/CTEE120691

Database: Compendex

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20130619 补

1.

Accession number: 20131716235598

Title: Analytical modeling of periodically inspected software rejuvenation policy

Authors: Meng, Haining¹; Hei, Xinhong¹; Liu, Jianjun²

Author affiliation: 1 School of Computer Science and Engineering, Xi'an Technology University, Xi'an 710048, China

2 Aeronautics Computing Technique Research Institute, Xi'an 710068, China

Corresponding author: Meng, H.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 6

Issue date: 2013

Publication year: 2013

Pages: 1227-1232

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)

Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan

Abstract: As a proactive and preventive software fault tolerant technique, software rejuvenation is a main method for counteracting software aging. In this study, a software

rejuvenation model based on periodical inspection policy is set up. Firstly, by analyzing runtime state and failure feature of software system, the functions of system unavailability and cost rate are given and optimal system inspection interval and software rejuvenation interval are selected via minimizing system unavailability and cost rate. Then boundary conditions of cost rate and optimal inspection interval are deduced. Finally, quantitative analysis and numeric experiment result show that selecting optimal inspection interval and software rejuvenation interval can greatly reduce system cost and improve system availability and reliability. In addition, the numeric experiment result further validate that the software rejuvenation model with periodical inspection policy has higher system availability than the general software rejuvenation model in the case of the failure rate following Weibull and exponential distribution. © 2013 Asian Network for Scientific Information.

Number of references: 11

Main heading: Software reliability

Controlled terms: Costs - Endocrinology - Experiments - Inspection -

Optimization - Weibull distribution

Uncontrolled terms: Cost rates - Periodical inspection - Software aging - Software rejuvenation - Unavailability

Classification code: 922.2 Mathematical Statistics - 921.5 Optimization Techniques - 913.3.1 Inspection - 913.3 Quality Assurance and Control - 911 Cost and Value Engineering; Industrial Economics - 901.3 Engineering Research - 461.6 Medicine and Pharmacology

DOI: 10.3923/itj.2013.1227.1232

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130621 新增 8 条

1.

Accession number: 20132416418274

Title: Properties of poly(lactic acid)/organo-montmorillonite nanocomposites prepared by solution intercalation

Authors: Li, Yang¹; Ren, Peng-Gang¹; Zhang, Qian¹; Shen, Ting-Ting¹; Ci, Ji-Hao¹; Fang, Chang-Qing¹;任鹏刚;;方长青

Author affiliation: 1 Institute of Printing and Packaging Engineering, Xian University of Technology, Xian, Shaanxi 710048, China

Corresponding author: Ren, P.-G. (rengpg@126.com)

Source title: Journal of Macromolecular Science, Part B: Physics

Abbreviated source title: J Macromol Sci Part B Phys

Volume: 52

Issue: 8

Issue date: January 1, 2013

Publication year: 2013

Pages: 1041-1055

Language: English

ISSN: 00222348

E-ISSN: 1525609X

CODEN: JMAPBR

Document type: Journal article (JA)

Publisher: Taylor and Francis Inc., 325 Chestnut St, Suite 800, Philadelphia, PA 19106, United States

Abstract: Poly(lactic acid)/organo-montmorillonite (PLA/OMMT) nanocomposite films were prepared through solution intercalation using dichloromethane as solvent. X-ray diffraction indicated that organo-montmorillonite (OMMT) was well intercalated and the interlayer spacing increased by 0.94-1.47 nm. Transmission Electron Microscopy showed that a majority of OMMT was fully exfoliated and uniformly dispersed in the PLA matrix at low filler loading, whereas more intercalated tactoids and aggregates of OMMT existed at high loading. The crystallinity of PLA was hardly changed with the addition of OMMT. Additionally, CO₂ permeability and water vapor transmission rate of the composite films were reduced with increasing content of OMMT. At 5 wt% OMMT loading, CO₂ permeability and water vapor transmission rate were reduced by 75.8% and 23.9%, respectively. The tensile strength (TS) and Young's modulus of the PLA/OMMT nanocomposites were first enhanced, and then decreased with increasing content of OMMT. Compared with pure PLA, a 83.8% increase in the Young's modulus and a 76.0% improvement in TS were obtained with the addition of 3 wt% OMMT. © 2013 Taylor & Francis Group, LLC.

Number of references: 32

Main heading: Loading

Controlled terms: Clay minerals - Composite films - Dichloromethane - Elastic moduli - Lactic acid - Mechanical permeability - Mechanical properties - Nanocomposites - Tensile strength - Transmission electron microscopy - Vapors - X ray diffraction

Uncontrolled terms: Crystallinities - Filler loading - Interlayer spacings - OMMT - Organo-montmorillonite - Poly lactic acid - Water vapor transmission rate - Young's Modulus

Classification code: 951 Materials Science - 804 Chemical Products Generally - 804.1 Organic Compounds - 931.2 Physical Properties of Gases, Liquids and Solids - 931.3 Atomic and Molecular Physics - 933 Solid State Physics - 933.1.1 Crystal Lattice - 761 Nanotechnology - 714.2 Semiconductor Devices and Integrated Circuits - 672 Naval Vessels - 482.2 Minerals - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 741.3 Optical Devices and Systems

DOI: 10.1080/00222348.2013.781937

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132416422480

Title: Model of profit allocation based on fuzzy bicooperative game

Authors: Feng, Qing-Hua^{1, 2}; Chen, Ju-Hong¹; Liu, Tong²/冯庆华;陈菊红;刘通

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology,

Xi'an 710054, China

2 School of Information, Xi'an University of Finance and Economics, Xi'an 710100, China

Corresponding author: Feng, Q.-H. (fqhua96183@126.com)

Source title: Kongzhi yu Juece/Control and Decision

Abbreviated source title: Kongzhi yu Juece Control Decis

Volume: 28

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 701-705

Language: Chinese

ISSN: 10010920

CODEN: KYJUEF

Document type: Journal article (JA)

Publisher: Northeast University, P.O. Box 125, Shenyang, 110005, China

Abstract: In the product servitization supply chain, the multiple providers provide products and services to the system integrators and gain the profits of products and services. Taking the double profit allocation of the providers as an example, the profit allocation model of the fuzzy bicooperative game is presented by the service quality of the provider as participation based on the bicooperative game. The Aubin core and the crisp core of the fuzzy bicooperative game are defined. It is proved that the Weber set is consistent with the crisp core and the Weber set is the subset of the Aubin core, and the greater the alliance, the greater the marginal profit with the service quality of the provider increases in the convex fuzzy bicooperative game, which indicate that the optimal allocation is existent and the fuzzy bicoalition is stable.

Number of references: 14

Main heading: Profitability

Controlled terms: Quality of service - Supply chains

Uncontrolled terms: Bi-cooperative game - Core - Optimal allocation - Products and services - Profit allocation - Provider - System integrators - Weber set

Classification code: 913 Production Planning and Control; Manufacturing - 912 Industrial Engineering and Management - 911.2 Industrial Economics - 723 Computer Software, Data Handling and Applications - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132416422377

Title: VLSI design of configured fractional pixel motion estimation with a small cache

Authors: Lu, Wei1 ; Yu, Ningmei1 ; Ren, Ru1 ; Kong, Rui1/;余宁梅;;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yu, N. (yunm@xaut.edu.cn)

Source title: Journal of Computational Information Systems

Abbreviated source title: J. Comput. Inf. Syst.

Volume: 9

Issue: 9

Issue date: May 1, 2013

Publication year: 2013

Pages: 3529-3536

Language: English

ISSN: 15539105

Document type: Journal article (JA)

Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States

Abstract: This paper proposes a circuit structure suitable for H.264 full search variable block fractional pixel motion estimation. Analyze the principle of fractional pixel motion estimation and complete the VLSI design. This architecture designs 32×32 size of the searching window, designs a real-time interpolation method according to the difference between 1/2 and 1/4 pixel interpolation algorithm, uses the six tap filter design and configurable PE, configures four processing units for 4×4 to 16×16 seven segmentation models on the fractional pixel motion estimation calculation. According to the characteristics of large amount of data after interpolation, in PE unit uses data exchanging and matching, thus saving chip cache space, improving the data utilization and throughput rate. After logic synthesis using SMIC 0.13 μm standard cell library, the number of gates is 309 K, chip cache is 3.9 KB. This design can handle 1920×1088 @ 70 fps under the working frequency of 300 MHz. © 2013 by Binary Information Press.

Number of references: 10

Main heading: Motion estimation

Controlled terms: Design - Electronic data interchange - Interpolation

Uncontrolled terms: Architecture designs - Can be configured - Fractional pixel motion estimation - Interpolation algorithms - Interpolation method - Segmentation models - Small cache space - VLSI

Classification code: 408 Structural Design - 716.1 Information Theory and Signal Processing - 723.2 Data Processing and Image Processing - 921.6 Numerical Methods

DOI: 10.12733/jcis5887

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132416422173

Title: A photoelectric detection system for all-fiber rotational Raman lidar

Authors: Li, Shi-Chun¹; Hua, Deng-Xin¹; Xin, Wen-Hui¹; Tian, Xiao-Yu¹; Zhang, Ai¹/李仕春;华灯鑫;辛文辉;田小雨;张爱

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Hua, D.-X. (dengxinhua@xaut.edu.cn)

Source title: Guangdianzi Jiguang/Journal of Optoelectronics Laser

Abbreviated source title: Guangdianzi Jiguang

Volume: 24

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 855-861

Language: Chinese

ISSN: 10050086

CODEN: GUJIE9

Document type: Journal article (JA)

Publisher: Board of Optoelectronics Lasers, No. 47 Yang-Liu-Qing Ying-Jian Road, Tian-Jin City, 300380, China

Abstract: A photoelectric detection system based on photon counting technique is designed using photomultiplier tube (PMT) for solving the detectable problem of the ultra-weak light level in all-fiber rotational Raman lidar. In order to improve the stability of the single photon pulse and the reliability of discrimination counting, the single photon pulse waveform is reshaped by impedance matching technique, and then the optimum selections of operational parameters such as PMT high-voltage power supply, discrimination threshold level are mainly discussed through testing pulse height distribution in differential method, so its signal-to-noise ratio is enhanced. The experimental testing system possessing the relative optical intensity changeability with certainty is configured, and then the action type of pulse pileup effect and the effective dead time in this system are experimentally tested based on pulse pileup non-linear analysis model of Poisson point process, so the reasonable nonlinearity correction may be adopted to improve its linearity. Experiment results show that this photoelectric detection system can implement the detection of weak optical signal whose photon counting rate is less than 140 MHz, and its linearity is better than 1.0%. The optimized and provided experimental schemes are significant for the photoelectric detection system of this type.

Number of references: 20

Main heading: Photoelectricity

Controlled terms: Atmospheric optics - Optical radar - Particle beams - Photons

Uncontrolled terms: Discrimination thresholds - High voltage power supply - Impedance matching technique - Nonlinearity correction - Photoelectric detection systems - Photon counting - Pulse height distribution - Rotational Raman lidar

Classification code: 716.2 Radar Systems and Equipment - 741.1 Light/Optics - 932.1 High Energy Physics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132416414706

Title: Experimental research on size effect of magnetic hysteresis loop for Q235 steel

Authors: Li, Ai Guo^{1, 2}; Zhao, Jun Hai¹; Xiong, Er Gang¹/李爱国;赵俊海;

Author affiliation: 1 School of Civil Engineering, Chang'an University, Xi'an 710061, China

2 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048,

China

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 690 693

Monograph title: Materials Design, Processing and Applications

Issue date: 2013

Publication year: 2013

Pages: 298-302

Language: English

ISSN: 10226680

ISBN-13: 9783037856925

Document type: Conference article (CA)

Conference name: 4th International Conference on Manufacturing Science and Engineering, ICMSE 2013

Conference date: March 30, 2013 - March 31, 2013

Conference location: Dalian, China

Conference code: 97228

Sponsor: Northeastern University, China; Harbin Institute of Technology; Jilin University

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The magnetic hysteresis loop is a significant performance of ferromagnetic material. The different-size specimens were fabricated and studied on the basis of magnetomechanical coupling tests. The curve of relationship between model size and magnetization intensity is obtained and hysteretic curve is described in the different conditions. The results indicate that the influencing law is reflected based on size effect of model specimens and performance of magnetic hysteresis and magnetization intensity. The results indicate that the size of Q235 steel model specimens is considerably influential in the magnetic hysteresis loop and magnetization, which accounts for an evident size effect. © (2013) Trans Tech Publications, Switzerland.

Number of references: 13

Main heading: Magnetic hysteresis

Controlled terms: Hysteresis loops - Magnetic materials - Magnetization - Size determination

Uncontrolled terms: Experimental research - Hysteretic curve - Magnetic intensities - Magnetization intensities - Magnetomechanical couplings - Model size - Q235 steel - Size effects

Classification code: 701.2 Magnetism: Basic Concepts and Phenomena - 708.4 Magnetic Materials - 921 Mathematics - 943.3 Special Purpose Instruments

DOI: 10.4028/www.scientific.net/AMR.690-693.298

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132416422413

Title: 3D reconstruction of architecture appearance: A survey

Authors: Ning, Xiaojuan1 ; Wang, Yinghui1/宁晓娟;王映辉

Author affiliation: 1 Institute of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Ning, X. (ningxiaojuan@xaut.edu.cn)

Source title: Journal of Computational Information Systems

Abbreviated source title: J. Comput. Inf. Syst.

Volume: 9

Issue: 10

Issue date: May 15, 2013

Publication year: 2013

Pages: 3837-3848

Language: English

ISSN: 15539105

Document type: Journal article (JA)

Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States

Abstract: Architecture is one of the main elements in outdoor scene of real world, and the reconstructed buildings models have wide applications in virtual reality, computer animation, urban planning and etc. In this paper, we first summarize and classify the recent methods according to different acquisition and modeling principle, discuss and compare the rule-based, image-based and point cloud based reconstruction method respectively from automation degree, input and output data. The paper evaluates the characteristics of each method including advantages and disadvantages and point out that point-based building reconstruction method will be the future research trend. Furthermore, it analyzes the issues such as data loss, mass data processing, manual interaction and visual comprehension that existed in point cloud based method, and the corresponding solutions are proposed so as to improve the integrity, real-time and practicability of the building reconstruction, and also it emphasizes the feasibility by combining the building rules and high-level semantic to reconstruct the details of building model. Finally, the challenge and future research direction are underlined based on the analysis of new progress in this field. © 2013 by Binary Information Press.

Number of references: 57

Main heading: Three dimensional

Controlled terms: Animation - Buildings - Data processing - Maintenance - Semantics - Urban planning - Virtual reality

Uncontrolled terms: Appearance information - Building reconstruction - Digital representations - Point cloud data - Three-dimensional model

Classification code: 402 Buildings and Towers - 403.1 Urban Planning and Development - 723 Computer Software, Data Handling and Applications - 903.2 Information Dissemination - 913.5 Maintenance

DOI: 10.12733/jcis5807

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132416413068

Title: Multiple-image encryption based on phase mask multiplexing in fractional Fourier

transform domain

Authors: Liansheng, Sui¹ ; Meiting, Xin¹ ; Ailing, Tian²/隋连升;;;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shanxi Province Key Lab of Thin Film Technology and Optical Test, Xi'an Technological University, Xi'an 710032, China

Corresponding author: Liansheng, S. (liudua2010@gmail.com)

Source title: Optics Letters

Abbreviated source title: Opt. Lett.

Volume: 38

Issue: 11

Issue date: June 1, 2013

Publication year: 2013

Pages: 1996-1998

Language: English

ISSN: 01469592

E-ISSN: 15394794

CODEN: OPLEDP

Document type: Journal article (JA)

Publisher: Optical Society of America, 2010 Massachusetts Avenue NW, Washington, DC 20036-1023, United States

Abstract: A multiple-image encryption scheme is proposed based on the phase retrieval process and phase mask multiplexing in the fractional Fourier transform domain. First, each original gray-scale image is encoded into a phase only function by using the proposed phase retrieval process. Second, all the obtained phase functions are modulated into an interim, which is encrypted into the final ciphertext by using the fractional Fourier transform. From a plaintext image, a group of phase masks is generated in the encryption process. The corresponding decrypted image can be recovered from the ciphertext only with the correct phase mask group in the decryption process. Simulation results show that the proposed phase retrieval process has high convergence speed, and the encryption algorithm can avoid cross-talk; in addition, its encrypted capacity is considerably enhanced. © 2013 Optical Society of America.

Number of references: 13

Main heading: Cryptography

Controlled terms: Image processing - Multiplexing - Phase shifters - Security of data

Uncontrolled terms: Convergence speed - Decryption process - Encryption algorithms - Fractional Fourier transforms - Gray-scale images - Multiple-image encryptions - Phase functions - Phase retrieval

Classification code: 703.1 Electric Networks - 716 Telecommunication; Radar, Radio and Television - 717 Optical Communication - 718 Telephone Systems and Related Technologies; Line Communications - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing

DOI: 10.1364/OL.38.001996

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132416419893

Title: 2-tuple linguistic fuzzy ISM and its application

Authors: Xiong, Guoqiang¹ ; Li, Ling¹ ; Hao, Jiantao¹/熊国强;;郝建涛

Author affiliation: 1 School of Business Administration, Xi'an University of Technology, Xi'an, 710054, China

Corresponding author: Xiong, G. (xgq168@163.com)

Source title: Advances in Intelligent and Soft Computing

Abbreviated source title: Adv. Intell. Soft Comput.

Volume: 78 AISC

Issue: VOL. 1

Monograph title: Fuzzy Information and Engineering 2010

Issue date: 2009

Publication year: 2009

Pages: 353-362

Language: English

ISSN: 18675662

ISBN-13: 9783642148798

Document type: Conference article (CA)

Conference name: 5th Annual Conference on Fuzzy Information and Engineering, ACFIE 2010

Conference date: September 23, 2010 - September 27, 2010

Conference location: Huludao, China

Conference code: 97313

Sponsor: Liaoning Technology University; Fuzzy Inf. Eng. Branch China Oper. Res. Soc.; IIGSS-GB

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: In view of the complexity of actual decision-making problem and the cognitive fuzziness of decision-makers, we present a modified fuzzy-ISM based on 2-tuple linguistic representation information processing technology in this paper. Using TAM operator, we process 2-tuple semantic information of decisionmaking. After integration and standardization, we built the 2-tuple linguistic representation fuzzy interpretive structural model (2TLR-FISM). This model is more accurate for processing fuzzy semantic information than conventional ISM which may process semantic information rough and is easy to make distortion and loss of information. Finally, take a case study of analysing the influential factors of emergency management to illustrate the feasibility of the method. © Springer-Verlag Berlin Heidelberg 2010.

Number of references: 14

Main heading: Linguistics

Controlled terms: Civil defense - Data processing - Disasters - Model structures - Risk management - Semantics

Uncontrolled terms: 2-tuple linguistic representations - 2TLR-FISM - Decision-making problem - Emergency management - Influential factors - Information processing technology - Interpretive structural models - Semantic information

Classification code: 404.2 Civil Defense - 408 Structural Design - 484 Seismology - 723.2 Data Processing and Image Processing - 903.2 Information Dissemination - 922.1

Probability Theory

Database: Compendex

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20130629 新增 9 条

1.

Accession number: 20132516433097

Title: Effect of Na₂SiO₃ concentration on energy consumption during arcing process of micro-arc oxidation on aluminum alloys

Authors: Ge, Yan-Feng¹; Jiang, Bai-Ling¹; Shi, Hui-Ying¹/葛延峰;蒋百灵;时惠英

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Jiang, B.-L. (jiangbail@vip.163.com)

Source title: Zhongguo Youse Jinshu Xuebao/Chinese Journal of Nonferrous Metals

Abbreviated source title: Zhongguo Youse Jinshu Xuebao

Volume: 23

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Issue date: April 2013

Publication year: 2013

Pages: 950-956

Language: Chinese

ISSN: 10040609

CODEN: ZYJXFK

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: The arcing process of micro-arc oxidation (MAO) on 1015 alloys aluminum (Al) using pulse power source in aqueous solutions with different Na₂SiO₃ concentrations was studied. The morphologies and surface resistance of initial films at arcing moment were analyzed and observed using scanning electron microscope (SEM) and electrochemical test, respectively. The effect of Na₂SiO₃ concentration on energy consumption of arcing process during MAO was calculated based on change curve of voltage. The results indicate that there is no arcing phenomenon but electrolytic etching on Al samples when the Na₂SiO₃ concentration is 0 and voltage is 1500 V. With Na₂SiO₃ solution concentration increasing from 0.25 g/L to 10 g/L, arcing voltage dropping from 1217 V to 351 V, arcing time reducing from 270 s to 40 s, the quantity of microspores on surface of initial films increases during arcing process of MAO. The high resistance film with resistance up to 10⁵ order of magnitude formed on the surface of Al samples is the premise of arcing phenomenon emerging in MAO process, and higher Na₂SiO₃ solution concentration is beneficial to forming high resistance film. The energy consumption of arcing process is diminished with Na₂SiO₃ solution concentration increasing, and minimum value is 16 kJ/dm² when Na₂SiO₃ concentration is 10 g/L.

Number of references: 17

Main heading: Concentration (process)

Controlled terms: Aluminum - Aluminum alloys - Energy utilization - Oxidation - Scanning electron microscopy - Silicon compounds - Sodium

Uncontrolled terms: Arcing phenomena - Arcing process - Electrochemical test - Electrolytic etching - Microarc oxidation - Pulse power sources - Sodium silicate - Solution concentration

Classification code: 802.3 Chemical Operations - 802.2 Chemical Reactions - 741.1 Light/Optics - 804.1 Organic Compounds - 549.1 Alkali Metals - 541.1 Aluminum - 525.3 Energy Utilization - 541.2 Aluminum Alloys

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132516432922

Title: Mechanical properties of iron-based hard coatings prepared by plasma spraying technology

Authors: Lei, Ali1 ; Feng, Lajun1 ; Shen, Wenning1 ; Wang, Guanchong1/雷阿利;冯拉俊;沈文宁

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Lei, A. (leiali@126.com)

Source title: Hanjie Xuebao/Transactions of the China Welding Institution

Abbreviated source title: Hanjie Xuebao

Volume: 34

Issue: 4

Issue date: April 2013

Publication year: 2013

Pages: 27-30

Language: Chinese

ISSN: 0253360X

CODEN: HHPAD2

Document type: Journal article (JA)

Publisher: Harbin Research Institute of Welding, No. 111 He-Xing Lu, Harbin, China

Abstract: In order to prepare wear-resistant coating on the surface of carbon steels and make the expansion coefficient of coating close to that of substrate and reduce stress in coating, mechanically mixed powders of 80%Fe, 13%P and 7%C were used to prepare iron-based wear-resistant coating by plasma spraying. The bonding strength was tested using binder dual tensile test method. The hardness in the coating was analyzed by surface microhardness method. And the wear resistance test of coating was carried out by MMW-2 (high temperature) friction and wear testing machine using 40Cr cemented carbide as grinding materials. The results show that the average bonding strength of the coating was 29 MPa, and the average microhardness was 805 HV50, higher than that of ceramic coating. The coating had better wear resistance, and the coating abrasion loss was around 36 mg which was about 1/13 of the grinding material. And the wear mechanism of the coating was mainly abrasive wear.

Number of references: 15

Main heading: Chromate coatings

Controlled terms: Abrasion - Carbon steel - Ceramic coatings - Diffusion bonding - Grinding (machining) - Hard coatings - Microhardness - Plasma spraying - Tensile testing - Tribology - Wear resistance

Uncontrolled terms: Bonding strength - Cemented carbides - Expansion coefficients - Friction and wear - Plasma spraying technology - Surface microhardness - Thermal spray - Wear-resistant coating

Classification code: 931 Classical Physics; Quantum Theory; Relativity - 813 Coatings and Finishes - 812.1 Ceramics - 951 Materials Science - 606.2 Abrasive Devices and Processes - 422.2 Strength of Building Materials : Test Methods - 421 Strength of Building Materials; Mechanical Properties - 545.3 Steel

Database: Compendex

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3.

Accession number: 20132516433155

Title: Proportional resonant control for two stage matrix converter excited doubly-fed wind power generation system

Authors: Wang, Junrui^{1, 2}; Zhong, Yanru¹; Song, Weizhang¹; Yang, Bo¹/王君瑞;钟彦儒;宋卫章;杨波

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Electrical and Information Engineering, The North University for Ethnic, Yinchuan 750021, China

Corresponding author: Wang, J. (jr09110111@163.com)

Source title: Gaodianya Jishu/High Voltage Engineering

Abbreviated source title: Gaodianya Jishu

Volume: 39

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 1210-1217

Language: Chinese

ISSN: 10036520

CODEN: GAJIE5

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Two-stage matrix converter (TSMC) has a real DC link, while it does not contain large DC link energy storage capacitors. Thereby, we introduced TSMC as an excitation source of doubly-fed wind power generation system, and established a control system of doubly-fed wind power generation based on the stator flux linkage orientation. Moreover, we developed a proportional resonant (PR) control strategy used in rotor converter according to principle of PR control. In this method, the active and reactive current components in the vector control strategy are adjusted after transforming into a stationary coordinate to realize the doubly-fed generator

independent regulation of active and reactive power. Compared with vector control using PI controller, this strategy does not need repeated coordinate transformation but simplify the control algorithm; for no coupling term and feed-forward compensation exist, the robustness of the control system is improved, improving the quality of output current. Simulation and experimental results show that PR control of TSMC excited doubly-fed wind power generation system has a good dynamic and static performance.

Number of references: 23

Main heading: Quality control

Controlled terms: Algorithms - Control systems - Electric power generation - Resonance

Uncontrolled terms: Connected to the grid - Decoupling controls - Doubly-fed wind power generations - Proportional-resonant controls - Two stage matrix converter - Variable speed constant frequency

Classification code: 615 Thermoelectric, Magnetohydrodynamic and Other Power Generators - 701 Electricity and Magnetism - 723 Computer Software, Data Handling and Applications - 731.1 Control Systems - 913.3 Quality Assurance and Control - 921 Mathematics

DOI: 10.3969/j.issn.1003-6520.2013.05.028

Database: Compendex

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4.

Accession number: 20132516429359

Title: Characteristics of spatial distribution of soil water-air-heat parameters in typical oasis croplands at middle reaches of Heihe River

Authors: Wang, Weihua¹ ; Wang, Quanjiu^{1, 2} ; Wu, Xiangbo¹ ; Wang, Shuo¹/王卫华;王全九;武向博;王铄

Author affiliation: 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, The Chinese Academy of Sciences, Yangling 712100, China

Corresponding author: Wang, Q. (wquanjiu@163.com)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 9

Issue date: May 1, 2013

Publication year: 2013

Pages: 94-102

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South,

Beijing, 100026, China

Abstract: Using statistical methods for a study on the spatial variations of soil properties has become one of hot topics in the study of soil science. Due to the deep research on the spatial variation of soil hydraulic parameters, and the lack of research on the dynamic characteristics of soil air and heat transfer, we cannot compare the spatial variation characteristics of soil, water, air, and heat transfer kinetic parameters. As the interaction between the soil and the environment as well as the precise regulation of farmland soil moisture, air and heat condition problem is receiving more and more attention, the numerical model used to study the soil moisture, air and heat transport process, effectiveness and its impact on crop growth and ecological environment has gradually become a reality. But model accuracy depends largely on the accuracy of soil, water, air, and heat transfer kinetic parameters. Thus, seeking a simple and feasible method of determining the thermal dynamic parameters of soil moisture is the focus of research around the world. In order to define the dynamic characteristics of water conductivity, air permeability and heat conductivity's spatial variability, this paper examines the spatial variation of the above parameters in Linze County, an agricultural area in the middle reaches of the Heihe River Basin. PL-300 soil air permeability measurement and soil heat pulse meter were applied to measured soil air permeability and thermal conductivity. In this paper, we designed an experiment of four levels of moisture content and took the average of three replications. Hydraulic conductivity is measured by qdisc infiltration instrument, each measuring point design four suction head, based on a spatial analysis function of GIS, The results showed as follows: 1) simulate the spatial structure and variability of the water, air, and heat parameters using land statistics of a wheat field. The optimal fitting model for saturated hydraulic conductivity, air permeability, thermal conductivity are an exponential model, the sum of squared residuals are small, nearly zero, and the determination coefficient R^2 reached more than 80%. The results show that the statistical method can better simulate the spatial structure and variation characteristics of soil moisture air and thermal parameters. Fractal dimension (D) was close to 2, illustrating that soil water conductivity, air permeability and heat conductivity have strong spatial variation characteristics in this region. 2) Saturated hydraulic conductivity, air permeability and heat conductivity's $C / (C + C_0) > 75\%$, had a strong degree of spatial autocorrelation in the study scale. Recommend sampling distances of hydraulic conductivity, air permeability and heat conductivity both are 10m. And sampling distances of the other soil physical parameters are recommend to be 4m. 3) Kriging interpolation results show that soil water and gas parameters change was having a certain degree of consistency, Thermal conductivity has certain regional characteristics in the study area. The higher the moisture content, bulk density and the greater the sand content are, the greater the thermal conductivity is, and the thermal conductivity has certain regional characteristics. Among the soil, thermal conductivity is high, the north and south were on both sides of the lower tendency in the saddle. The research will be for the local soil moisture, air and thermal parameters field scale space mutation research to provide a certain reference basis.

Number of references: 31

Main heading: Geologic models

Controlled terms: Agriculture - Air permeability - Fractal dimension - Heat transfer
- Hydraulic conductivity - Kinetic parameters - Moisture - Moisture determination
- Research - Soil moisture - Soils - Space applications - Spatial variables
measurement - Statistical methods - Thermal conductivity - Thermal conductivity of

gases

Uncontrolled terms: Determination coefficients - Geo-statistics - Saturated hydraulic conductivity - Soil hydraulic parameters - Soil water conductivities - Spatial autocorrelations - Spatial variability - Variation characteristics

Classification code: 944.2 Moisture Measurements - 901.3 Engineering Research - 921 Mathematics - 922.2 Mathematical Statistics - 931 Classical Physics; Quantum Theory; Relativity - 931.2 Physical Properties of Gases, Liquids and Solids - 943.2 Mechanical Variables Measurements - 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 656 Space Flight - 641.2 Heat Transfer - 632.1 Hydraulics - 483.1 Soils and Soil Mechanics - 481.1 Geology - 801.4 Physical Chemistry

DOI: 10.3969/j.issn.1002-6819.2013.09.013

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132516429404

Title: Quantitative analysis of soil erosion and nutrient loss in Yingwugou watershed of the Dan River

Authors: Xu, Guoce¹; Li, Zhanbin^{1, 2}; Li, Peng²; Zhang, Tiegang²; Tang, Shanshan²/徐国策;李占斌;李鹏;张铁钢;汤姗姗

Author affiliation: 1 State Key Laboratory of Soil Erosion and Dry-land Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Water Resources, Yangling, 712100, China

2 Key Laboratory of Northwest Water Resources and Environment Ecology of Ministry of Education, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Li, Z. (zhanbinli@126.com)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 10

Issue date: May 15, 2013

Publication year: 2013

Pages: 160-167

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: The quantitative study of soil erosion and nutrient loss in a small watershed can provide an important basis for ecological protection, soil, and water conservation, and ecological compensation in the water source areas of the South to North Water Diversion Project. Revised universal soil loss equation (RUSLE) was used to estimate the soil erosion and nutrient loss

supported by the geographic information system (GIS) in the Yingwugou watershed; however, the soil erosion intensity of the study area was classified. The results indicated that the annual soil erosion modulus in the Yingwugou watershed was 3140 t/km². This falls in the category of moderate degree erosion. The area above high soil erosion intensity only accounted for 24.1% but the soil erosion amount was 4573.0 t, which accounted for 84.8% of the annual soil erosion amount. The high soil erosion area was mainly distributed in sloping cropland with big slopes, which was the key management area. Soil erosion amounts under different land-use types showed great differences. The annual soil erosion modulus of forestland, grassland, and cropland were 509.7, 1511.8, and 4606.5 t/km², respectively. The annual soil erosion amount of forestland and grassland was relatively small and the annual soil erosion amount of cropland accounted for 95.3% of the total soil erosion amount in the study area. For each additional 5° slope, the increased soil erosion modulus of different land uses was 1 to 2 times greater than that of each additional 5m for slope length. The annual loss amount of total nitrogen, total phosphorus, and organic matter in topsoil was 3.81, 3.52, and 101.45 t, respectively. The nutrient loss of cropland was serious. The annual loss modulus of total nitrogen, total phosphorus, and organic matter with sediment were 1.01, 0.75, and 38.43 t/(km² • a), respectively. The study could provide a scientific basis for the control of soil erosion and water loss, non-point source pollution, and the construction of clean, small watersheds in the water source area.

Number of references: 31

Main heading: Soil conservation

Controlled terms: Biogeochemistry - Biological materials - Ecology - Erosion - Forestry - Geographic information systems - Land use - Landforms - Organic compounds - River pollution - Sediment transport - Soil pollution control - Soils - Water conservation - Water pollution control - Watersheds

Uncontrolled terms: Ecological compensation - Non-point source pollution - Revised universal soil loss equations - River watersheds - RUSLE - Soil and water conservation - Soil nutrients - South-to-North water diversion project

Classification code: 481.1 Geology - 481.2 Geochemistry - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 723.3 Database Systems - 804.1 Organic Compounds - 821.0 Woodlands and Forestry - 461.2 Biological Materials and Tissue Engineering - 403 Urban and Regional Planning and Development - 407 Maritime and Port Structures; Rivers and Other Waterways - 444 Water Resources - 444.1 Surface Water - 453 Water Pollution - 453.2 Water Pollution Control - 454.3 Ecology and Ecosystems

DOI: 10.3969/j.issn.1002-6819.2013.10.022

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132516432807

Title: Controlling of hardness of cast iron joint by manual arc welding

Authors: Xu, Jinfeng¹ ; Ren, Yongming¹ ; Zhai, Qiuya¹/徐锦锋;任永明;翟秋亚

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xu, J. (xu-zhai@xaut.edu.cn)

Source title: Hanjie Xuebao/Transactions of the China Welding Institution

Abbreviated source title: Hanjie Xuebao

Volume: 33

Issue: 11

Issue date: November 2012

Publication year: 2012

Pages: 105-109

Language: Chinese

ISSN: 0253360X

CODEN: HHPAD2

Document type: Journal article (JA)

Publisher: Harbin Research Institute of Welding, No. 111 He-Xing Lu, Harbin, China

Abstract: Repairing of casting defect for iron casting has great economic significance. The relationship between welding parameters and joint microstructure along with hardness is investigated by micro-alloyed gray cast iron homogenous electrodes and DC welding machine. The results show that the welding parameters have significant effects on joint microstructure and hardness. Keeping the welding current constant, the higher the preheating temperature is, the more uniform the temperature distribution is and slower the cooling rate of joint is, the much easier gray cast iron microstructure forms. Keeping the preheat temperature constant, with the increase of welding current, welding heat input increases and the cooling rate of joint decreases, which is easy to form gray cast iron microstructure with non-chilled phase. The welding parameters should be controlled in the upper right zone of welding current-preheat temperature-microstructure type diagram. By strictly controlling of welding current and preheat temperature, and using small current to make a rendering combined with high-current continuous welding process, the microstructure and hardness of joint can be effectively controlled, obtaining the homogenous weld with excellent machinability.

Number of references: 7

Main heading: Cast iron

Controlled terms: Cooling - Defects - Electric welding - Hardness - Machinability - Microstructure - Preheating - Repair - Welding electrodes

Uncontrolled terms: Casting defect - Cooling rates - Joint microstructures - Manual arc welding - Preheat temperature - Preheating temperature - Welding current - Welding parameters

Classification code: 951 Materials Science - 933 Solid State Physics - 913.5 Maintenance - 641.2 Heat Transfer - 604.2 Machining Operations - 545.2 Iron Alloys - 538 Welding and Bonding - 423 Non Mechanical Properties and Tests of Building Materials - 421

Strength of Building Materials; Mechanical Properties

Database: Compendex

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7.

Accession number: 20132416423756

Title: Microstructure and corrosion resistance of modified AZ31 magnesium alloy using

microarc oxidation combined with electrophoresis process

Authors: Yang, Wei¹ ; Wang, Ping¹ ; Guo, Yongchun¹ ; Jiang, Bailing² ; Yang, Fei² ; Li, Jianping¹ / 杨威;王平;郭咏春;蒋百灵;;;

Author affiliation: 1 School of Materials Science and Chemical Engineering, Xi'an Technological University, Xi'an 710032, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Guo, Y. (yc-guo@163.com)

Source title: Journal Wuhan University of Technology, Materials Science Edition

Abbreviated source title: J Wuhan Univ Technol Mater Sci Ed

Volume: 28

Issue: 3

Issue date: June 2013

Publication year: 2013

Pages: 612-616

Language: English

ISSN: 10002413

CODEN: JWUTE8

Document type: Journal article (JA)

Publisher: Wuhan Ligong Daxue, 122, Luoshi Road Wuhan Hubei, 430070, China

Abstract: A top electrophoresis coating was deposited on the surface microarc oxidation (MAO) modified ceramic coating on AZ31 magnesium alloy. Microstructure and corrosion resistance of this composite coating were studied by SEM, electrochemical potentiodynamic polarization, and acid corrosion test. The results showed that the composite coating with a top electrophoresis coating on the surface of ceramic coating exhibited a better corrosion resistance compared with the coating formed by chemical conversion film combined with electrophoresis process. Corrosive ions could permeate into the substrate with corrosion time, and the composite coating was firstly destroyed around the scratch. The formation of composite coating with a higher adhesive force due to the porosity of the ceramic coating contributed to the improved corrosion resistance property. © 2013 Wuhan University of Technology and Springer-Verlag Berlin Heidelberg.

Number of references: 20

Main heading: Corrosion resistance

Controlled terms: Adhesion - Ceramic coatings - Composite coatings - Electrophoresis - Magnesium alloys - Microstructure

Uncontrolled terms: Acid corrosion - Adhesive force - AZ31 magnesium alloy - Chemical conversions - Corrosion time - Electrochemical potentiodynamic polarizations - Microarc oxidation

Classification code: 539.1 Metals Corrosion - 542.2 Magnesium and Alloys - 801 Chemistry - 813.2 Coating Materials - 933 Solid State Physics - 951 Materials Science

DOI: 10.1007/s11595-013-0739-9

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132516432765

Title: Pitting corrosion resistance of PH stainless steel of FV520B and its welding joint

Authors: Zhang, Min¹ ; Zhang, Enhua¹ ; Zhi, Jinhua^{1, 2} ; Meng, Qiang¹ ; Zhang, Haicun²/张敏; 张恩华;

Author affiliation: 1 School of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Shangu Power Co., Ltd, Xi'an 710075, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Hanjie Xuebao/Transactions of the China Welding Institution

Abbreviated source title: Hanjie Xuebao

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Issue date: October 2012

Publication year: 2012

Pages: 37-40

Language: Chinese

ISSN: 0253360X

CODEN: HHPAD2

Document type: Journal article (JA)

Publisher: Harbin Research Institute of Welding, No. 111 He-Xing Lu, Harbin, China

Abstract: The corrosion-resistance of the steel FV520B had been tested respectively in the HCl and H₂SO₄ (10%) under the 35°C. The result showed that under the above condition the base metal and the welding welding joint suffered a much more serious pitting corrosion in the HCl (10%) than that in the H₂SO₄ of the same mass fraction, the chloridion has more serious destructive effect on the passivation film of the stainless steel, which causes the deeper corrosive pitting. while the corrosive effect of 10% mass fraction H₂SO₄ is relatively inferior, the corrosion products are different either, but under the different corrosive environment, all the corrosive level of the weld joint in the welding point is lower than the HAZ.

Number of references: 9

Main heading: Pitting

Controlled terms: Corrosion resistance - Microstructure - Stainless steel - Welding

Uncontrolled terms: Base metals - Corrosion products - Corrosive environment -

Destructive effects - Mass fraction - Passivation film - Welding joints - Welding point

Classification code: 538.2 Welding - 539.1 Metals Corrosion - 545.3 Steel - 933 Solid State Physics - 951 Materials Science

Database: Compendex

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9.

Accession number: 20132516433104

Title: Effect of trace boron addition on microstructure and properties of CuNiMnFe alloy

Authors: Zou, Jun-Tao¹ ; Zhao, Jian-Ping¹ ; Wang, Xian-Hui¹ ; Liang, Shu-Hua¹/邹军涛;赵建平;王献辉;梁淑华

Author affiliation: 1 Shaanxi Province Key Laboratory for Electrical Materials and Infiltration Technology, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liang, S.-H. (liangsh@xaut.edu.cn)

Source title: Zhongguo Youse Jinshu Xuebao/Chinese Journal of Nonferrous Metals

Abbreviated source title: Zhongguo Youse Jinshu Xuebao

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Issue date: April 2013

Publication year: 2013

Pages: 1005-1011

Language: Chinese

ISSN: 10040609

CODEN: ZYJXFK

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: In order to refine the dendrite and eliminate the segregation of CuNiMnFe alloy, the molten CuNiMnFe alloy was modified by trace boron addition. The effect of the modification treatment on microstructures and properties of the CuNiMnFe alloy was studied, the microstructure and phase were characterized by the scanning electron microscope, transmission electron microscope and energy dispersive spectrum, and the hardness and tensile strength of alloys were measured on Brinell hardness tester and universal material testing machine, respectively. The results show that B addition has a significant effect on the microstructures of CuNiMnFe alloy. In the range of 0-0.15%B (mass fraction), the increased boron addition can refine the dendrite microstructure, reduce the secondary dendrite arm spacing (SDAS) and the amount of eutectic β phase, while the precipitation of the secondary β and nail-head γ phase inside the dendrites increase. At 0.10%B, SDAS is the least, the lamellar eutectic β phase almost disappears, and the obvious secondary β phase and nail-head γ phase inside the dendrite. With the boron adding, the as-cast hardness and aged hardness of the CuNiMnFe alloy increase at first, and then decrease. The as-cast CuNiMnFe alloy with 0.1%B addition has the peak hardness, and the aged peak hardness can remain the maximum hardness value of HB380. The tensile strength of aged CuNiMnFe alloy can reach up 1130 MPa.

Number of references: 20

Main heading: Cerium alloys

Controlled terms: Alloys - Boron - Brinell hardness testing - Dendrites (metallography) - Hardness - Microstructure - Scanning electron microscopy - Tensile strength - Transmission electron microscopy

Uncontrolled terms: Energy dispersive spectrum - Microstructure and properties - Microstructures and properties - Modification - Precipitated phase - Scanning Electron Microscope - Secondary dendrite arm spacing - Transmission electron microscope

Classification code: 933.1.2 Crystal Growth - 933 Solid State Physics - 741.3 Optical Devices and Systems - 741.1 Light/Optics - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 951 Materials Science - 547.2 Rare Earth Metals -

531.1 Metallurgy - 422.2 Strength of Building Materials : Test Methods - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 531.2 Metallography
Database: Compendex
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20130706 新增 12 条

1.

Accession number: 20132616443185

Title: Reservoir systems operation model using simulation and neural network

Authors: Chang, Jianxia^{1, 2}; Wang, Yimin¹; Huang, Qiang¹/畅建霞;王义民;黄强

Author affiliation:

1 Xi 'An University of Technology, Shaan xi, Xi' an, 710048, China

2 Xi'An University of Architecture and Technology, Shaan xi, Xi' an, 710048, China

Source title: Artificial Intelligence Applications and Innovations - IFIP TC12 WG12.5 - 2nd IFIP Conference on Artificial Intelligence Applications and Innovations, AIAI 2005

Abbreviated source title: IFIP TC WG - IFIP Conf. Artif. Intell. Appl. Innovations, AIAI

Monograph title: Artificial Intelligence Applications and Innovations - IFIP TC12 WG12.5 - 2nd IFIP Conference on Artificial Intelligence Applications and Innovations, AIAI 2005

Issue date: 2005

Publication year: 2005

Pages: 519-526

Language: English

ISBN-10: 0387283188

ISBN-13: 9780387283180

Document type: Conference article (CA)

Conference name: 2nd International Conference on Artificial Intelligence Applications and Innovations, AIAI 2005

Conference date: September 7, 2005 - September 9, 2005

Conference location: Beijing, China

Conference code: 97354

Sponsor: IFIP Tech. Comm. Artif. Intell. (Tech. Comm.); Working Group 12.5 (Artificial Intelligence Applications)

Publisher: Springer Science and Business Media, LLC, 233 Spring Street, New York, NY 10013, United States

Abstract: For multi-reservoir operating rules, a simulation-based neural network model is developed in this study. In the suggested model, multi-reservoir operating rules are derived using a neural network from the results of simulation. The training of the neural network is done using a supervised learning approach with the back propagation algorithm. The Yellow River upstream multi reservoir system is used for this study. This paper presents the usefulness of the neural network in deriving general operating policies for a multi-reservoir system.

Number of references: 8
Main heading: Computer simulation
Controlled terms: Neural networks
Uncontrolled terms: Multi-reservoir systems - Neural network model - Operating policies - Reservoir operating rules - Reservoir systems - Simulation model - Supervised learning approaches - Yellow river
Classification code: 723.4 Artificial Intelligence - 723.5 Computer Applications
DOI: 10.1007/0-387-29295-0-56
Database: Compendex
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2.

Accession number: 20132616453998
Title: Preparation of amorphous alloy atomization process numerical simulation and the formulation of process parameters by bar plasma spray
Authors: Feng, La-Jun1 ; Wang, Guan-Chong1 ; Yan, Ai-Jun1, 2/冯拉俊;王官充;闫爱军
Author affiliation:
1 College of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
2 Shaanxi Electricity Power Research Institute, Xi'an 710054, China
Corresponding author: Wang, G.-C.
Source title: Gongneng Cailiao/Journal of Functional Materials
Abbreviated source title: Gongneng Cailiao
Volume: 44
Issue: 7
Issue date: April 15, 2013
Publication year: 2013
Pages: 1059-1062
Language: Chinese
ISSN: 10019731
CODEN: GOCAEA
Document type: Journal article (JA)
Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China
Abstract: In accordance with past achievement in one-dimensional stable fluid dynamic by flame spray, an atomization mechanism was provided in preparation of amorphous coating by bar material plasma spraying. It is found that the measured particle median diameter agree well with those obtained by numerical simulation. It shows that the mechanism of atomization is feasible by bar material plasma spaying. Two main process parameters are optimized to produce ferrous amorphous coating; the parameters includes primary gas pressure and secondary gas pressure. The results show that it can be obtained amorphous coating with 3 mm crystal bar Fe80P13C7 and Fe72Cr8P13C7. The spray coating process parameters are as follows: spraying electric voltage of 55 V, spraying electric current of 600 A, distance between nozzle and bar of 4 mm, bar velocity of 50 mm/min, spraying distance of 100 mm, spraying angle about of 90°, primary gas pressure of 0.85 MPa and secondary gas pressure of 0.32 MPa.

Number of references: 11
Main heading: Computer simulation
Controlled terms: Amorphous alloys - Atomization - Chromate coatings - Flame spraying - Plasma jets - Plasma spraying - Spray nozzles
Uncontrolled terms: Amorphous coating - Atomization mechanism - Atomization process - Electric voltage - Median diameters - Process parameters - Spray coating process - Spraying distance
Classification code: 817.2 Polymer Applications - 813.2 Coating Materials - 802.3 Chemical Operations - 932.3 Plasma Physics - 723.5 Computer Applications - 631.1 Fluid Flow, General - 531 Metallurgy and Metallography - 631.1.2 Gas Dynamics
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132616454053
Title: Mechanical properties of composite ceramic coatings plasma-sprayed on magnesium alloy
Authors: Feng, La-Jun¹ ; Lei, A-Li¹ ; Wang, Guan-Chong¹ ; Xu, Yong-Zheng¹ ; Zhang, Jing¹ / 冯拉俊;雷阿利;王官充;许永征;张静
Author affiliation:
1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
Corresponding author: Feng, L.-J.
Source title: Gongneng Cailiao/Journal of Functional Materials
Abbreviated source title: Gongneng Cailiao
Volume: 44
Issue: 9
Issue date: May 15, 2013
Publication year: 2013
Pages: 1298-1300+1304
Language: Chinese
ISSN: 10019731
CODEN: GOCAEA
Document type: Journal article (JA)
Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China
Abstract: Aiming at the reality of aluminium piston surface easy scratches, in this paper the composite ceramic coating was deposited on XGFH-3 aluminium substrate by plasma spraying with composite ceramic powder prepared by mechanical ball milling and PVA granulating technology. The bond strength between the coating and substrate, the coating microhardness and the wear resistance for coating and substrate were measured by using oxygen to feed powder without transition layer. The results showed that the maximum bond strength, 19.07 MPa, for the coating sprayed with powder milled for 16 h were reached. The maximum microhardness of the coating, HV0.11105, was realized, which was 16 times harder than the substrate. The wear mass per unit area of the substrate was about 8.5 times larger than the

coatings, of which the maximum, 13.6 times, was realized.

Number of references: 13

Main heading: Aluminum alloys

Controlled terms: Aluminum - Ball milling - Bond strength (materials) - Ceramic coatings - Magnesium alloys - Mechanical alloying - Microhardness - Plasma jets - Plasma spraying - Substrates - Wear resistance

Uncontrolled terms: Composite ceramic - Composite ceramic coating - Mechanical ball milling - Per unit - Plasma-sprayed - Properties of composites - Transition layers

Classification code: 932.3 Plasma Physics - 813.2 Coating Materials - 801

Chemistry - 631.1.2 Gas Dynamics - 542.2 Magnesium and Alloys - 951 Materials

Science - 541.2 Aluminum Alloys - 533.1 Ore Treatment - 531 Metallurgy and

Metallography - 461 Bioengineering and Biology - 421 Strength of Building Materials;

Mechanical Properties - 541.1 Aluminum

DOI: 10.3969/j.issn.1001-9731.2013.09.020

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132616443499

Title: Mechanism of interaction between terahertz continuous wave and weakly ionized plasma

Authors: Hou, Lei1 ; Shi, Wei1/侯磊;施卫

Author affiliation:

1 Department of Applied Physics, Xi'an University of Technology, No.5 Jinhua South Road, Shaanxi, 710048, China

Source title: Laser and Tera-Hertz Science and Technology, LTST 2012

Abbreviated source title: Laser Tera-Hertz Sci. Technol., LTST

Monograph title: Laser and Tera-Hertz Science and Technology, LTST 2012

Issue date: 2012

Publication year: 2012

Language: English

Document type: Conference article (CA)

Conference name: Laser and Tera-Hertz Science and Technology, LTST 2012

Conference date: November 1, 2012 - November 2, 2012

Conference location: Wuhan, China

Conference code: 97362

Sponsor: Huazhong University of Science Technology; ICOglobe; Optical Valley of China OVC

Publisher: Optical Society of American (OSA), 2010 Massachusetts Ave, NW, Washington, DC, DC 20036, United States

Abstract: Weakly ionized plasma in neon lamps can be used to detect terahertz waves. The mechanism of interaction between terahertz continuous wave and weakly ionized plasma is analyzed and verified by experiment. © 2012 OSA.

Number of references: 8

Main heading: Plasmas

Controlled terms: Electric lighting - Ionization
Uncontrolled terms: Continuous Wave - Tera Hertz - Weakly ionized plasma
Classification code: 707.1 Electric Lighting - 802.2 Chemical Reactions - 932.3 Plasma Physics
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132616448511

Title: Research on the red-yellow-blue partition method for water resources management

Authors: Huang, Jun-Ming¹ ; Xie, Jian-Cang¹ ; Lu, You-Xing² ; Sun, Bo¹/黄俊铭;解建仓;卢友行;孙博

Author affiliation:

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2 Quanzhou Water of Fujian Province, Quanzhou 362000, China

Corresponding author: Huang, J.-M. (secretaa@163.com)

Source title: Shuili Xuebao/Journal of Hydraulic Engineering

Abbreviated source title: Shuili Xuebao

Volume: 44

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 527-533

Language: Chinese

ISSN: 05599350

CODEN: SLHPBI

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: Research on water resources partition management has great significance for putting strict water resources management system and building a water-saving society. According to the similarity of the situation of water resources utilization and the effects of water-environment, the river basin water resources can be managed in three subregions marked with different colors of red, yellow and blue using extended nearest neighbor algorithms, and taking different water resources management measures for different subregions accordingly. Based on the case study of Quanzhou city, the authors created a red-yellow-blue partition system with visualization for water resources management, and put forward corresponding management mode and countermeasures for each subregion. The results show that such partition method works well and reduces the effects of differences in zoning indicators on regionalization; and the development of the red-yellow-blue partition system is conducive to the realization of dynamic and strict basin water resources management.

Number of references: 15

Main heading: Water resources

Controlled terms: Algorithms - Flow
visualization - Management - Research - Visualization - Water conservation
Uncontrolled terms: Management modes - Nearest neighbor algorithm - Partition
methods - Partition systems - Quanzhou city - River basin water resource
(RBWR) - Water resources management - Water resources utilizations
Classification code: 921 Mathematics - 912.2 Management - 902.1 Engineering
Graphics - 901.3 Engineering Research - 723 Computer Software, Data Handling and
Applications - 631.1 Fluid Flow, General - 444 Water Resources
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132616454206

Title: Permanent faults identification using least squares fitting algorithm for
three-phase reclosure in transmission lines with shunt reactors

Authors: Liang, Zhenfeng^{1, 2} ; Suonan, Jiale¹ ; Kang, Xiaoning¹ ; Song, Guobing¹/梁振峰;索
南加勒

Author affiliation:

1 School of Electrical Engineering, Xi'an Jiaotong University, Xi'an 710049, China

2 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology,
Xi'an 710048, China

Corresponding author: Kang, X.

Source title: Hsi-An Chiao Tung Ta Hsueh/Journal of Xi'an Jiaotong University

Abbreviated source title: Hsi An Chiao Tung Ta Hsueh

Volume: 47

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 85-89+96

Language: Chinese

ISSN: 0253987X

CODEN: HCTPDW

Document type: Journal article (JA)

Publisher: Xi'an Jiaotong University, West Xian Ning Road 28, Xi'an, 710049, China

Abstract: To heighten sensitivity of permanent fault identification for
single-phase-to-ground fault, a three-phase adaptive reclosure in transmission lines with shunt
reactors is developed. It is found that the shunt reactor zero modal current gets with different
free oscillation frequencies in transient fault or permanent fault in the case of
single-phase-to-ground. An identification model of shunt reactor zero-modal current is
established, which includes decaying DC component and two frequency components
corresponding to transient fault and permanent fault. Once the single-phase-to-ground fault
occurs and circuit breakers open, each frequency component is obtained by least square fitting,
where shunt reactor zero-modal current is available. The amplitudes of various frequency
components are adopted to distinguish the permanent faults from transient faults. EMTP

simulation shows that the proposed scheme is of higher sensitivity and freedom from the influences of transient resistance and fault position in permanent faults identification for transmission lines with shunt reactors.

Number of references: 13

Main heading: Power quality

Controlled terms: Electric fault currents - Electric grounding - Electric lines - Electric reactors - Fault tree analysis - Reclosing circuit breakers - Transmission line theory

Uncontrolled terms: Decaying DC components - Free oscillation frequencies - Least squares fitting - Least-square fitting - Shunt reactors - Single phase to ground faults - Three-phase adaptive reclosure - Transient resistance

Classification code: 421 Strength of Building Materials; Mechanical Properties - 704 Electric Components and Equipment - 704.1 Electric Components - 706 Electric Transmission and Distribution - 921 Mathematics

DOI: 10.7652/xjtuxb201306015

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132616454015

Title: In-situ synthesis of zinc porphyrin sensitized TiO₂ photocatalyst and its photocatalytic activity

Authors: Niu, Jin-Fen¹; Yao, Bing-Hua¹; Yu, Xiao-Jiao¹; Peng, Chao¹; Lu, Lei-Lei¹/钮金芬; 姚秉华; 余晓皎; 彭超; 路蕾蕾

Author affiliation:

1 School of Science, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yao, B.-H.

Source title: Gongneng Cailiao/Journal of Functional Materials

Abbreviated source title: Gongneng Cailiao

Volume: 44

Issue: 8

Issue date: April 30, 2013

Publication year: 2013

Pages: 1132-1135

Language: Chinese

ISSN: 10019731

CODEN: GOCAEA

Document type: Journal article (JA)

Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China

Abstract: The zinc porphyrin (ZnTHPP) sensitized TiO₂ photocatalysts were synthesized by in-situ solvothermal method. The photocatalysts were characterized by XRD, SEM, UV-Vis, and TG-DTA. The results showed that ZnTHPP was indeed appeared during the in-situ method, and the crystal structure and morphology of TiO₂ were not affected by the existence of porphyrin. The TG-DTA and degradation test results show that ZnTHPP-TiO₂ composite exhibited the better thermal stability and catalytic activity than those prepared by simple physical adsorption method.

Number of references: 15
Main heading: Photocatalysts
Controlled terms: Aromatic compounds - Photocatalysis - Porphyrins - Titanium dioxide - Zinc - Zinc compounds
Uncontrolled terms: In-situ preparations - Methylene
Blue - Sensitized - TiO - Zinc porphyrins
Classification code: 546.3 Zinc and Alloys - 741.1 Light/Optics - 803 Chemical Agents and Basic Industrial Chemicals - 804.1 Organic Compounds - 804.2 Inorganic Compounds
Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132616454181
Title: An experimental study on hydraulic characteristics of a novel aerator
Authors: Niu, Zhengming¹ ; Nan, Junhu^{1, 2} ; Hong, Di^{1, 3}/牛争鸣;;;
Author affiliation:
1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, Xi'an 710048, China
2 School of Energy and Power Engineering, Lanzhou University of Technology, Lanzhou 730050, China
3 Yellow River Upstream Hydropower Limited Liability Company, Xining 810209, China
Corresponding author: Nan, J. (nanjh@yahoo.cn)
Source title: Shuikexue Jinzhan/Advances in Water Science
Abbreviated source title: Shuikexue Jinzhan
Volume: 24
Issue: 3
Issue date: May 2013
Publication year: 2013
Pages: 372-378
Language: Chinese
ISSN: 10016791
CODEN: SHUJE6
Document type: Journal article (JA)
Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China
Abstract: The use of an annular aerator placing in the vertical shaft of flood discharge tunnel is a new engineering idea, and is different from the traditional ones. In order to better understand this new type of technology, the ventilation and aeration characteristics of the annular aerator are studied based on the prototype and modeling experiments carried out in the gyrating discharge tunnel of the Gongboxia Hydropower Project. The results show that the ventilation is caused by the pressure difference of air vents. The relationship between the ventilation and relative cavity length follows the linear distribution. The aeration effect on the annular aerator is obvious. The jet is striking water in the shaft, and then a large-scale aerated vortex is generated with bubbles thereby contributing to the aeration forming. The aeration

concentration presents a power distribution in the vertical shaft. The ventilation and aeration scale effects of models are both obvious. Therefore, the use of an annular aerator is necessary to set in the vertical shaft of gyrating discharge tunnel while satisfying the structural designs demands, which can improve the flow pattern and increase the energy dissipation significantly.

Number of references: 11

Main heading: Ventilation

Controlled terms: Buoyancy - Energy dissipation - Structural design - Water aeration

Uncontrolled terms: Annular aerator - Experimental studies - Flood discharge tunnel - Hydraulic characteristic - Hydropower projects - Linear distribution - Pressure differences - Vertical shaft

Classification code: 408.1 Structural Design, General - 445.1 Water Treatment

Techniques - 525.4 Energy Losses (industrial and residential) - 631 Fluid Flow - 643.5 Ventilation

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20132616454297

Title: A current distribution strategy for parallel DC-DC converters based on the efficiency model

Authors: Sun, Jinkun¹; Liu, Qingfeng¹; Leng, Zhaoxia¹; Wang, Huamin¹; Tong, Xiangqian¹/孙金坤;刘庆丰;冷朝霞;王华民;同向前

Author affiliation:

¹ School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Sun, J. (sunjinkun@gmail.com)

Source title: Zhongguo Dianji Gongcheng Xuebao/Proceedings of the Chinese Society of Electrical Engineering

Abbreviated source title: Zhongguo Dianji Gongcheng Xuebao

Volume: 33

Issue: 15

Issue date: May 25, 2013

Publication year: 2013

Pages: 10-18

Language: Chinese

ISSN: 02588013

CODEN: ZDGXER

Document type: Journal article (JA)

Publisher: Chinese Society of Electrical Engineering, Qinghe, Beijing, 100085, China

Abstract: For utilizing energy availably, the system efficiency of distributing power supply ought to be improved possibly; the system is composed of DC-DC converters with uniform or different power grade. In this paper, the efficiency model of Buck converters in the continuous conduction mode (CCM) was deduced based on the average loss, and the calculation method of parameters for the efficiency model was given. For optimizing the operation efficiency of the

paralleled system, the current distribution strategy based on the efficiency model was presented. The optimization object function of the Buck converter paralleled system was designed. The calculation method of module currents was deduced and the constraint condition of currents was analyzed. The adjust method of the paralleled module number was also given. Numerical simulations and experiments were done. It is validated that the efficiency of the paralleled system can be improved adopting the current distribution strategy based on efficiency optimization, which is compared with the system adopting the average current distribution. © 2013 Chin. Soc. for Elec. Eng.

Number of references: 20

Main heading: DC-DC converters

Controlled terms: Efficiency - Electric current distribution
measurement - Losses - Optimization

Uncontrolled terms: Constraint conditions - Continuous conduction
mode - Current-sharing - Efficiency optimization - Operation efficiencies - Optimization
object function - Parallel DC-DC converters - Paralleling

Classification code: 704.1 Electric Components - 911.2 Industrial Economics - 913.1

Production Engineering - 921.5 Optimization Techniques - 942.2 Electric Variables

Measurements

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20132516439029

Title: A novel control system design based on solid the PLC

Authors: Wei, Wei1 ; Zhang, Jing1 ; Li, Hongye1 ; Hu, Jie1 ; Wang, Wei1 ; Yin, Xiaoyan2 ;
Wang, Feng1 ; Song, Xin1 ; Wang, Zhixiao1 ; Wang, Yongchao1 ; Shen, Peiyi3 ; Geng, Jiachen1/魏
嵬;张璟;;王伟;;

Author affiliation:

1 School of Computer Science and Engineering, Xi' an University of Technology, Xi' an 710048,
China

2 Department of Computer Science and Technology, Northwest University, Xi'an 710127,
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3 National School of Software, Xidian University, 710071, Xi'an, Shaanxi, China

Corresponding author: Wei, W.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 7

Issue date: 2013

Publication year: 2013

Pages: 1464-1467

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)
Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan
Abstract: This system uses Mitsubishi PLC and computer configuration screen monitoring control mode, press the button or picture can complete automobile access process, simple operation, easy access. Control circuit of traditional way by ac contactor, safe and reliable operation. Through the configuration software, database construction, the animation process control, connection and debugging, realized the monitoring system of three-dimensional garage. Finally discusses in detail the design of control system based on the two layers of garage structure for three models. Finally discusses in detail the design of control system based on the two layers of garage structure for three models. Lift the solid carport, its part can be divided into three parts: the garage structure parts, motivation and control system is part. According to lift the operating principle of the solid carport, on the fluctuation of three-dimensional garage control system design, uses the advanced PLC control, using the software Mitsubishi of lifting the solid carport control procedures, commissioning, operation and proved by using the Programmable Logic Controller (PLC) as the control system is simple. © 2013 Asian Network for Scientific Information.
Number of references: 3
Main heading: Program debugging
Controlled terms: Access control - Animation - Computer control systems - Computer software - Control systems - Garages (parking) - Systems analysis - Three dimensional
Uncontrolled terms: Computer configuration - Configuration software - Design of control system - Parking systems - Plc controllers - Programmable logic controllers (PLC) - Simulation software - Three-dimensional garages
Classification code: 402.2 Public Buildings - 723 Computer Software, Data Handling and Applications - 731.1 Control Systems
DOI: 10.3923/itj.2013.1464.1467
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20132616444904
Title: A hybrid method to deformation force of high-speed cold roll-beating forming
Authors: Yang, Ming-Shun¹ ; Li, Yan¹ ; Yuan, Qi-Long¹/杨明顺;李言;袁启龙
Author affiliation:
1 School of Mechanical and Precision Instrument Engineering, Xi' An University of Technology, Xi' an 710048, China
Source title: Journal of Digital Information Management
Abbreviated source title: J. Digit. Inf. Manage.
Volume: 11
Issue: 2
Issue date: April 2013
Publication year: 2013
Pages: 146-153

Language: English
ISSN: 09727272
Document type: Journal article (JA)
Publisher: Digital Information Research Foundation, 2 Srinivasamoorthy Avenue, L.B Road, Adyar, Chennai, 600 020, India
Abstract: High-speed cold roll-beating forming technique is a new near-net plastic forming method that the intermittent high-speed roll-beating is used to achieve dynamic impact local loading, and that is fast, transient, high impact, large deformation of the complex forming process. For this forming process, the main stress method is employed to derive an analytic formula for the deformation force. Taking into account the main stress method can not reflect impact factors such as high-speed transient roll beating in process of this analytic solution, then the ABAQUS/Explicit is applied to simulate for highspeed cold roll- beating. The regression analysis is used to correct for the analytic formula based on simulation results, which makes the analytic formula more accurate reflection of deformation force of the different technological parameters of high-speed cold roll-beating. The forming experiments are carried out with self developed high-speed cold roll-beating experimental equipment and the experimental of deformation force is measured to verify the correctness of the corrected analytic formula.
Number of references: 12
Main heading: Deformation
Controlled terms: Analytic equipment - Loading - Regression analysis
Uncontrolled terms: Cold roll-beating - Deformation forces - Experimental equipments - Experimental verification - Forming experiments - Forming techniques - Slab method - Technological parameters
Classification code: 421 Strength of Building Materials; Mechanical Properties - 422 Strength of Building Materials; Test Equipment and Methods - 672 Naval Vessels - 801 Chemistry - 922.2 Mathematical Statistics
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20132616448518
Title: A soil water characteristic curve model considering void ratio variation with stress
Authors: Zhang, Zhao1 ; Liu, Feng-Yin1 ; Zhao, Xu-Guang2 ; Zhou, Dong3/张昭;刘凤银;;
Author affiliation:
1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China
2 China Water Resources Pearl River Planning Surveying and Designing Co. Ltd., Guangzhou 510610, China
3 Yellow River Engineering Consulting Co. Ltd., Zhengzhou 450003, China
Corresponding author: Liu, F.-Y. (fyliu@pub.xaonline.com)
Source title: Shuili Xuebao/Journal of Hydraulic Engineering
Abbreviated source title: Shuili Xuebao
Volume: 44
Issue: 5
Issue date: May 2013

Publication year: 2013
Pages: 578-585
Language: Chinese
ISSN: 05599350
CODEN: SLHPBI
Document type: Journal article (JA)
Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China
Abstract: Soil water characteristic curve plays a significant role in unsaturated soil mechanics, geotechnical and geoenvironmental engineering. A series of soil water characteristic tests for remoulded loess specimens under no stress state and certain consolidation stress states. For Xi'an loess and Saskatchewan silt, Indian Head till in the past literatures, the result shows that the evolutions of water-solid volumetric ratio with matric suction can be normalized by a single curve in the certain consolidation or preconsolidation void ratio ranges. A new model considering void ratio variation with stress is proposed based on van Genuchten model. In addition, the model can not only be in good accordance with the test data, but also provide a new insight into the hydro-mechanical constitutive relationship for unsaturated soils.
Number of references: 35
Main heading: Geologic models
Controlled terms: Sediments - Silt - Soil mechanics - Soil moisture - Stresses
Uncontrolled terms: Consolidation stress - Constitutive relationships - Geoenvironmental engineering - Soil water characteristics - Soil-water characteristic curve - Unsaturated soil - Unsaturated soil mechanics - Void ratios
Classification code: 421 Strength of Building Materials; Mechanical Properties - 481.1 Geology - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics
Database: Compendex

20130713 新增 7 条

1.

Accession number: 20133216582787
Title: Soft-templated synthesis of mesoporous carbon nanospheres and hollow carbon nanofibers
Authors: Cheng, Youliang^{1, 2}; Li, Tiehu²; Fang, Changqing¹; Zhang, Maorong¹; Liu, Xiaolong¹; Yu, Rui¹; Hu, Jingbo¹/程有亮;李铁虎;方长青;张茂荣;刘晓龙;于瑞恩;胡京博
Author affiliation:
1 School of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, China
2 School of Materials Science and Engineering, Northwestern Polytechnical University, Xi'an 710072, China
Corresponding author: Fang, C. (funivy@163.com)
Source title: Applied Surface Science
Abbreviated source title: Appl Surf Sci
Volume: 282
Issue date: October 1, 2013

Publication year: 2013
Pages: 862-869
Language: English
ISSN: 01694332
CODEN: ASUSEE
Document type: Journal article (JA)
Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands
Abstract: Using coal tar pitch based amphiphilic carbonaceous materials (ACMs) as the precursor and amphiphilic triblock copolymer Plutonic P123 as the only soft template, carbon nanospheres with partially ordered mesopores and hollow carbon nanofibers were synthesized. The concentration of P123, cp, and the mass ratio of P123 to ACM, r, are the key parameters of controlling the shape of the as-prepared products. Mesoporous carbon nanospheres with diameter of 30-150 nm were prepared under the condition of cp = 13.3 g/L and r = 1.2. When cp = 26.7 g/L and r = 2, hollow carbon nanofibers with diameters of 50-200 nm and mesopores/macropores were obtained. Carbon nanospheres and hollow carbon fibers were amorphous materials. The mesoporous carbon nanospheres show good stability in the cyclic voltammograms and their specific capacitance at 10 mV s⁻¹ is 172.1 F/g. © 2013 Elsevier B.V. All rights reserved.
Number of references: 30
Main heading: Nanospheres
Controlled terms: Amorphous materials - Carbon nanofibers - Mesoporous materials - Nanofibers - Porous materials
Uncontrolled terms: Amphiphilic triblock copolymers - Carbon nanosphere - Carbonaceous materials - Coal tar pitch - Cyclic voltammograms - Mesoporous carbon - Ordered mesopores - Specific capacitance
Classification code: 761 Nanotechnology - 931.2 Physical Properties of Gases, Liquids and Solids - 933 Solid State Physics - 933.2 Amorphous Solids - 951 Materials Science
DOI: 10.1016/j.apsusc.2013.06.072
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132716460454
Title: Drawing clustered Graph using modular decomposition tree
Authors: Deng, Wan-Yu1 ; Zhang, Kai1 ; Zheng, Qing-Hua1 ; Wei, Wei2/;;魏巍
Author affiliation:
1 School of Computer, Xi'an University of Posts and Telecommunications, Xi'an, Shaan'xi, RPC, 710121, China
2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, 710048, China
Corresponding author: Deng, W.-Y.
Source title: Information Technology Journal
Abbreviated source title: Inf. Technol. J.
Volume: 12

Issue: 8
 Issue date: 2013
 Publication year: 2013
 Pages: 1491-1501
 Language: English
 ISSN: 18125638
 E-ISSN: 18125646
 Document type: Journal article (JA)
 Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan
 Abstract: Compared with macro visualization like small-world structure in WWW, some fields such as knowledge visualization need such layout that can show detailed information of nodes and at the same time can reveal clustered structure of the Graph. Based on modular decomposition, energy model and adjustable center distance, one hierarchical layout algorithm was proposed. Through modular decomposition, the graph was firstly represented by a tree hierarchically. The local positions were then obtained from bottom to top and then the global positions are obtained from top to bottom. The experimental results on various datasets showed that the algorithm can achieve artistic and nearly non-overlapping appearance. © 2013 Asian Network for Scientific Information.
 Number of references: 17
 Main heading: Trees (mathematics)
 Controlled terms: Algorithms - Forestry - Information systems - Visualization
 Uncontrolled terms: Center distance - Clustered graph - Clustered structure - Graph layout - Information visualization - Knowledge Visualization - Layout algorithms - Modular decomposition
 Classification code: 723 Computer Software, Data Handling and Applications - 821.0 Woodlands and Forestry - 902.1 Engineering Graphics - 903.2 Information Dissemination - 921 Mathematics - 921.4 Combinatorial Mathematics, Includes Graph Theory, Set Theory
 DOI: 10.3923/itj.2013.1491.1501
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132716470849
 Title: The dynamic stable region of drilling tools system in deep hole drilling
 Authors: Kong, Ling-Fei¹ ; Li, Yan¹ ; Lyu, Yan-Jun¹ ; Tang, Ao-Fei¹/孔令飞;李言;吕延军;汤奥斐
 Author affiliation:
 1 School of Mechanic and Precision Instrument Engineer, Xi'an University of Technology, Xi'an 710048, Shaanxi, China
 Corresponding author: Kong, L.-F. (lingfeikong@xaut.edu.cn)
 Source title: Binggong Xuebao/Acta Armamentarii
 Abbreviated source title: Binggong Xuebao

Volume: 34
 Issue: 5
 Issue date: May 2013
 Publication year: 2013
 Pages: 611-619
 Language: Chinese
 ISSN: 10001093
 CODEN: BIXUD9
 Document type: Journal article (JA)
 Publisher: China Ordnance Society, P.O. Box 2431, Beijing, 100081, China
 Abstract: Based on the extended Hamilton principle, the finite element model of lateral vibration of drilling shaft is established using Timoshenko element model. Under the condition of maintain nonlinear analysis precision, the linear degrees of drilling shaft system will be truncated using mode synthesis technique with free-interface but its nonlinear degrees are retained in the physical space, and simultaneously, the eliminated eigenmodes are compensated with the residual attachment modes. So the DOF of the coupled system is reduced. Based on the updated model, the natural frequency influence rules of the drilling shaft system, as changing the distance of the intermediate supports, the length of drilling shaft and its the inner diameter, are discussed. By drilling the structural style of intersection hole as an example, the dynamic stable region and instability modes of the drilling shaft system are analyzed under the different rotating speed and drilling depth in drilling process. The numerical results show that the proposed methods for the dynamic design of complex drilling deep hole machine and the analysis of machining accuracy provide a theoretical basis.
 Number of references: 14
 Main heading: Numerical methods
 Controlled terms: Machinery - Machining - Nonlinear analysis
 Uncontrolled terms: Deep hole drilling - Drilling tool - Machinery manufacture - Modal reduction - Stable region
 Classification code: 601 Mechanical Design - 604.2 Machining Operations - 921 Mathematics - 921.6 Numerical Methods
 DOI: 10.3969/j.issn.1000-1093.2013.05.016
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132716461206
 Title: Dynamic mechanics of soil erosion by runoff on loess slope
 Authors: Peng, Li1 ; Linhong, Zhang1 ; Zhanbin, Li1, 2 ; Liangyong, Zheng1, 3/李鹏;;李占斌;;
 Author affiliation:
 1 Xi'an University of Technology, Xi'an Shaanxi, 710048, China
 2 Institute of Soil and Water Conservation, Chinese Academy of Sciences, Ministry of Water Resource, Yangling Shaanxi, 712100, China
 3 Shandong Survey and Design Insititute of Water Conservancy, Jinan, Shandong, 250013, China

Source title: Nature Environment and Pollution Technology
 Abbreviated source title: Nat. Environ. Pollut. Technol.
 Volume: 12
 Issue: 2
 Issue date: June 2013
 Publication year: 2013
 Pages: 297-301
 Language: English
 ISSN: 09726268
 Document type: Journal article (JA)
 Publisher: Technoscience Publications, 2, Shila Apartment, Shila Nagar, Near T.V.Tower, Karad- 415110, Maharashtra, India
 Abstract: In this research, soil erosion and sediment yield were calculated by runoff shear stress, runoff energy consumption and runoff power theory. Results indicated that a linear relationship existed between the average runoff shear stress and sediment yield. Soil erodibility in the experiment was 178.5g/(Pa·min), and the critical shear stress value was 0.54 Pa. Results from energy consumption implied that there was also a linear relationship between sediment transportation and energy consumption of runoff unit width: $D_r = 14.61 (\Delta E - 0.37)$, which indicated that the soil erodibility was 14.61g/J, with a critical energy consumption of 0.37J/(min·cm). Results from runoff power theory showed that sediment transportation increased with increase in runoff power, and the simple linear relationship was also regressed: $Y = 8942.2x - 68.676$. Generally, these three theories each showed certain advantages in describing the soil erosion processes on the slope, among which the results from energy consumption theory were simpler, more accurate, and proved more convenient in describing soil erosion on the slope.
 Number of references: 20
 Main heading: Runoff
 Controlled terms: Energy
 utilization - Erosion - Sedimentology - Sediments - Shear stress - Soils
 Uncontrolled terms: Critical shear stress - Linear relationships - Loess
 slopes - Runoff energy consumption - Runoff shear stress - Sediment
 transportation - Simple linear relationship - Soil erosion
 Classification code: 421 Strength of Building Materials; Mechanical Properties - 444.1
 Surface Water - 481.1 Geology - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil
 Mechanics - 525.3 Energy Utilization
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132716461190
 Title: Effect of vegetation cover types on soil infiltration under simulating rainfall
 Authors: Pingping, Huang¹ ; Xue, Sha^{2, 3} ; Li, Peng¹ ; Zhanbin, Li^{1, 2, 3}; 薛蕊;李鹏;李占斌
 Author affiliation:
 1 Key Lab of Northwest Water Resources and Environment Ecology of MOE, Xi'an University of

Technology, Xi'an, Shaanxi 710048, China

2 State Key Laboratory of Soil Erosion and Dryland Farming, Loess Plateau of Northwest A and F University, Yangling, Shaanxi, 712100, China

3 Institute of Soil and Water Conservation, Chinese Academy of Sciences and Ministry of Education, Yangling, Shaanxi, 712100, China

Source title: Nature Environment and Pollution Technology

Abbreviated source title: Nat. Environ. Pollut. Technol.

Volume: 12

Issue: 2

Issue date: June 2013

Publication year: 2013

Pages: 193-198

Language: English

ISSN: 09726268

Document type: Journal article (JA)

Publisher: Technoscience Publications, 2, Shila Apartment, Shila Nagar, Near T.V.Tower, Karad- 415110, Maharashtra, India

Abstract: In this study, simulated rainfall was applied to study the process of runoff generation and water infiltration under the cover of herbaceous vegetation at the preliminary succession stages. Results indicated that at the preliminary succession stages, as soil texture was loose, water infiltration was high. With the vegetation succession and the accumulation of organic matter in the soil, both physical and chemical properties of the soil were improved, which made the soil texture tight, and water infiltration rates decrease. With the progress of the rainfall, parts of the microbiotic soil crust were destroyed by raindrop impact, and water infiltration rates were improved. This result indicated that the existence of microbiotic soil crust reduced the soil infiltration rate. Thus, it is of great importance to improve soil infiltration by destroying the microbiotic soil crust with proper measures such as grazing in arid and semi-arid areas.

Number of references: 29

Main heading: Infiltration

Controlled terms: Arid regions - Chemical properties - Rain - Soil moisture - Textures - Vegetation

Uncontrolled terms: Arid and semi-arid areas - Herbaceous vegetation - Infiltration rate - Physical and chemical properties - Simulated rainfall - Soil crusts - Vegetation successions - Water infiltration

Classification code: 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 801 Chemistry - 483.1 Soils and Soil Mechanics - 933 Solid State Physics - 444 Water Resources - 443 Meteorology - 423 Non Mechanical Properties and Tests of Building Materials - 443.3 Precipitation

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133016528237

Title: Single-channel color image encryption using phase retrieve algorithm in fractional

Fourier domain

Authors: Sui, Liansheng¹ ; Xin, Meiting¹ ; Tian, Ailing² ; Jin, Haiyan¹/隋连升;辛美婷;田爱玲;金海燕

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shanxi Province Key Lab of Thin Film Technology and Optical Test, Xi'an Technological University, Xi'an 710032, China

Corresponding author: Sui, L. (liudua2010@gmail.com)

Source title: Optics and Lasers in Engineering

Abbreviated source title: Opt Lasers Eng

Volume: 51

Issue: 12

Issue date: December 2013

Publication year: 2013

Pages: 1297-1309

Language: English

ISSN: 01438166

CODEN: OLENDN

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: A single-channel color image encryption is proposed based on a phase retrieve algorithm and a two-coupled logistic map. Firstly, a gray scale image is constituted with three channels of the color image, and then permuted by a sequence of chaotic pairs generated by the two-coupled logistic map. Secondly, the permutation image is decomposed into three new components, where each component is encoded into a phase-only function in the fractional Fourier domain with a phase retrieve algorithm that is proposed based on the iterative fractional Fourier transform. Finally, an interim image is formed by the combination of these phase-only functions and encrypted into the final gray scale ciphertext with stationary white noise distribution by using chaotic diffusion, which has camouflage property to some extent. In the process of encryption and decryption, chaotic permutation and diffusion makes the resultant image nonlinear and disorder both in spatial domain and frequency domain, and the proposed phase iterative algorithm has faster convergent speed. Additionally, the encryption scheme enlarges the key space of the cryptosystem. Simulation results and security analysis verify the feasibility and effectiveness of this method. © 2013 Elsevier Ltd. All rights reserved.

Number of references: 43

Main heading: Cryptography

Controlled terms: Algorithms - Image processing - Iterative methods - White noise

Uncontrolled terms: Color image encryptions - Encryption and decryption - Encryption schemes - Fractional Fourier domains - Fractional Fourier transforms - Iterative algorithm - Noise distribution - Single-channel

Classification code: 921 Mathematics - 741 Light, Optics and Optical Devices - 723

Computer Software, Data Handling and Applications - 921.6 Numerical Methods - 718

Telephone Systems and Related Technologies; Line Communications - 716 Telecommunication;

Radar, Radio and Television - 711 Electromagnetic Waves - 717 Optical Communication

DOI: 10.1016/j.optlaseng.2013.06.005

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132716470903

Title: Application of fast S-transform in power quality analysis

Authors: Zhang, Zhiyu¹ ; Man, Weishi¹ ; Xi, Lei¹ ; Huang, Luyao¹/张志禹¹;;;

Author affiliation:

1 School of Automation, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Zhang, Z. (zhangzhiyu@xaut.edu.cn)

Source title: Dianwang Jishu/Power System Technology

Abbreviated source title: Dianwang Jishu

Volume: 37

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 1285-1290

Language: Chinese

ISSN: 10003673

CODEN: DIJIES

Document type: Journal article (JA)

Publisher: Power System Technology Press, China Electric Power Research Institute, Qinghe, Beijing, 100085, China

Abstract: S transform is a time-frequency transform with adaptive resolution, which is widely used in analyzing the power quality recently. However, the traditional S transform is very computation-intensive ($O(N^3)$ time complexity) and difficult to meet the real-time requirements. A new fast S transform (FST) algorithm ($O(N \log N)$ time complexity) is introduced to analyze the power quality, which can differentiate the different voltage disturbances in the FST domain, and denoise the voltage disturbances. Compared with the traditional S-transform in terms of efficiency, simulation results show that the different voltage disturbances have different coefficient manifestations in the FST domain, and the original time-domain voltage signal is recovered after the voltage noise disturbances are suppressed with FST algorithm. The FST algorithm shows better real-time in view of computational time and memory share.

Number of references: 20

Main heading: Computational complexity

Controlled terms: Algorithms - Error detection - Power quality

Uncontrolled terms: Computational time and memory - De-noising - Fast s transforms - Power-quality analysis - Real time

requirement - Real-time - Time-frequency transforms - Voltage disturbances

Classification code: 706.1.2 Electric Power Distribution - 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 723 Computer Software, Data Handling and Applications - 921 Mathematics

Database: Compendex
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20130720 新增 20 条

1.

Accession number: 20132816485585

Title: Modeling soil solute release into runoff and transport with runoff on a loess slope

Authors: Dong, Wencai^{1, 2} ; Wang, Qianjiu^{3, 4};王全九

Author affiliation:

1 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences, Yangling, Shaanxi 712100, China

2 Univ. of Chinese Academy of Sciences, Beijing 100049, China

3 Institute of Water Resources, Xi'an Univ. of Technology, Xi'an, Shaanxi 710048, China

4 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of Soil and Water Conservation, Chinese Academy of Sciences, No. 26 Xinong Rd., Yangling, Shaanxi 712100, China

Corresponding author: Wang, Q. (wqianjiu@163.com)

Source title: Journal of Hydrologic Engineering

Abbreviated source title: J. Hydrol. Eng.

Volume: 18

Issue: 5

Issue date: 2013

Publication year: 2013

Pages: 527-535

Language: English

ISSN: 10840699

Document type: Journal article (JA)

Publisher: American Society of Civil Engineers (ASCE), 1801 Alexander Graham Bell Drive, Reston, VA 20191-4400, United States

Abstract: Rainfall results in the transfer of chemicals from soil to surface runoff. A physically-based solute transport model was developed for estimating the solute concentration in runoff originating from the soil surface. The model accounts for the effects of soil infiltration, raindrops, the water runoff rate, and the return flow, all of which influence the concentration of the solutes in the runoff. It was assumed that the depth of mixing zone changed with the varieties of the raindrop hits, return flow, and overland flow. It was also assumed that runoff and soil in the mixing zone mixed instantaneously and that the solute in the soil beneath the mixing zone was moved to the mixing zone by diffusion. The mixing zone was included in the model and was based on the deposited layer or shield concept. To test the model, laboratory experiments were carried out that used two soil types that were exposed to simulated rainfall. The results simulated by the model were highly correlated with the experimental data. In the first few minutes after rainfall began, the solute concentration in the runoff was mainly controlled by the rainfall rate and solute concentration in the mixing zone; higher solute levels in the mixing zone

resulted in higher solute concentrations in runoff. When the solute concentration in the runoff stabilized, the solute concentration in the runoff was mainly controlled by the diffusion of solutes from the soil beneath the mixing zone. The simulated data showed a high level of correlation with the measured data for both runoff volume and solute concentration in the runoff. This demonstrates that the model captured the temporal behavior of the runoff and solute transport in the runoff. © 2013 American Society of Civil Engineers.

Number of references: 50

Main heading: Runoff

Controlled terms: Computer simulation - Diffusion - Drops - Mixing - Rain - Soil testing - Soils - Solute transport

Uncontrolled terms: Experimental datum - Laboratory experiments - Mixing zones - Physically based models - Raindrop impact - Simulated rainfall - Solute concentrations - Solute transport model

Classification code: 443.3 Precipitation - 444.1 Surface Water - 483.1 Soils and Soil Mechanics - 723.5 Computer Applications - 802.3 Chemical Operations - 931.1 Mechanics

DOI: 10.1061/(ASCE)HE.1943-5584.0000622

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132816484435

Title: Study on intelligentized multiple-scheme urban road preferential technology

Authors: Fan, Cuixiang¹ ; Liu, Hui¹/;

Author affiliation:

1 Xi'an University of Technology, Xi'an 710082, China

Corresponding author: Fan, C. (fancuixiang111@sohu.com)

Source title: Qinghua Daxue Xuebao/Journal of Tsinghua University

Abbreviated source title: Qinghua Daxue Xuebao

Volume: 52

Issue: SUPPL.1

Issue date: October 2012

Publication year: 2012

Pages: 137-140

Language: Chinese

ISSN: 10000054

CODEN: QDXKE8

Document type: Journal article (JA)

Publisher: Press of Tsinghua University, 15 Xueyuanlu, Beijing, 100083, China

Abstract: The road traffic capacity and utilization efficiency will be significantly raised with vehicle timetables being reduced if dynamic optimization of full traffic paths is realized based on real-time traffic information, with reasonable avoidance of congested roads, reduction of red light waiting time, and the short path selection. An intelligentized multiple-scheme preferential technology for urban roads was developed using the state space searching method to provide different intelligentized urban road selection schemes for different requirements under real-time traffic conditions, with a primary algorithm designed for each scheme. The results show the

feasibility of this technology.

Number of references: 8

Main heading: Roads and streets

Controlled terms: Street traffic control

Uncontrolled terms: Dynamic navigations - Dynamic optimization - Optimal paths - Real-time traffic conditions - Real-time traffic information - State space searching - Urban road - Utilization efficiency

Classification code: 406.2 Roads and Streets

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132716471648

Title: Study on optimization of thermal key points for machine tools based on Fisher optimal segmentation method

Authors: Gao, Feng^{1, 2}; Liu, Jiang¹; Yang, Xingang¹; Li, Yan¹; Yang, Yan¹/高峰;刘江;杨新刚;李艳;杨艳

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Mechanical Engineering, Shaanxi University of Technology, Hanzhong 723003, China

Corresponding author: Gao, F. (gf2713@xaut.edu.cn)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 1070-1075

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: When establishing thermal error model using temperature measuring points, the selection of temperature measuring points has a great influence on the accuracy of thermal error modeling. A novel optimal segmentation approach-Fisher optimal segmentation method is presented. The experiment acquired raw data are taken as the analysis data, the diameters of the classes are calculated, and the error functions of the classes are compared. The measuring point variables for machine tool are classified; the correlation coefficients between temperature variables and thermal errors of the classes are calculated; the thermal key points used for thermal error modeling are obtained; and thereby the optimization of temperature measuring points is achieved. Finally, the thermal error model is established with multiple linear regression analysis method from the optimized thermal key points. The established thermal error model

was compared with that built from the temperature test points selected using the variable grouping optimization method, and comparison results indicate that the Fisher optimal segmentation method is feasible and has strong practicability.

Number of references: 11

Main heading: Optimization

Controlled terms: Linear regression - Machine tools - Temperature measurement

Uncontrolled terms: Correlation coefficient - Error

function - Keypoints - Measuring points - Optimal segmentation

Classification code: 603.1 Machine Tools, General - 921.5 Optimization

Techniques - 922.2 Mathematical Statistics - 944.6 Temperature Measurements

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132716471692

Title: Experimental research on integrative bipolar charged agglomerator

Authors: He, Jian¹ ; Liu, Daoqing² ; Xu, Guosheng¹/何剑;刘道清;徐国胜

Author affiliation:

1 Northwest Key Laboratory of Water Resource and Environment Ecology of Ministry of Education, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

2 Research and Development Center of Baoshan Iron and Steel Co., Ltd., Baoshan District, Shanghai 201900, China

Corresponding author: He, J. (hejian2410@163.com)

Source title: Zhongguo Dianji Gongcheng Xuebao/Proceedings of the Chinese Society of Electrical Engineering

Abbreviated source title: Zhongguo Dianji Gongcheng Xuebao

Volume: 33

Issue: 17

Issue date: June 15, 2013

Publication year: 2013

Pages: 45-50

Language: Chinese

ISSN: 02588013

CODEN: ZDGXER

Document type: Journal article (JA)

Publisher: Chinese Society of Electrical Engineering, Qinghe, Beijing, 100085, China

Abstract: An integrated method and device of fine particle bipolar charging and agglomeration was presented, in which particles charged and agglomerated simultaneously with a set of fluidic agglomeration unit at the end. A comprehensive experimental system was constructed by using fly ash as test dust. Particle size distribution before and after integrative bipolar charged agglomerator (IBCA) was analyzed by an aerodynamic particle sizer (APS) and emission of electrostatic precipitator downstream by an on-line dust concentration monitor. The results show that agglomeration eigenvalue increase with the rising of operating voltage of positive charged channels but with small changes of negative charged channels. Agglomeration performance is negatively related to dust concentration and the optimum airflow velocity of

agglomeration electric field is 7.8 m/s. The maximum agglomeration eigenvalue can reach above 1.5, while emission of electrostatic precipitator downstream can be reduced by 69.7%. It proves that IBCA has excellent agglomeration performance and is effective in fine particles removal. © 2013 Chinese Society for Electrical Engineering.

Number of references: 22

Main heading: Agglomeration

Controlled terms: Air - Dust - Eigenvalues and eigenfunctions - Electric fields - Electrostatic precipitators - Fly ash - Particle size analysis

Uncontrolled terms: Aerodynamic particle sizer - Collection efficiency - Dust concentration monitor - Eigen-value - Experimental research - Experimental system - Fine particles - Fine particles removal

Classification code: 951 Materials Science - 921.1 Algebra - 804 Chemical Products Generally - 802.3 Chemical Operations - 701.1 Electricity: Basic Concepts and Phenomena - 451.2 Air Pollution Control - 451.1 Air Pollution Sources

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132816488823

Title: Adaptive outlier-tolerant predictors of controlled autoregressive process

Authors: Hu, Shao Lin¹ ; Yang, Yue² ; Li, Meng¹/胡绍林;;;

Author affiliation:

1 Automation and Information Engineering of Xi'an University of Technology, 710048, China

2 College of Software, Sichuan University, Chengdu, 610065, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 321-324

Monograph title: Mechatronics and Industrial Informatics

Issue date: 2013

Publication year: 2013

Pages: 829-832

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037856949

Document type: Conference article (CA)

Conference name: 2013 International Conference on Mechatronics and Industrial Informatics, ICMII 2013

Conference date: March 13, 2013 - March 14, 2013

Conference location: Guangzhou, China

Conference code: 97672

Sponsor: Korea Maritime University; Hong Kong Industrial Technology Research Centre

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The controlled autoregressive model is widely used to describe a dynamic process.

In this paper, a series of new algorithms are proposed to estimate the model's coefficients and to predict future change of the process. On the one hand, it is can be proved that these new algorithms are outlier-tolerant in the case that there are outliers in sampling series. On the one hand, these new algorithms are near to the optimal estimators and predictors separately in normal case. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Process control

Controlled terms: Algorithms - Diagnosis - Information science - Random processes - Statistics

Uncontrolled terms: Auto regressive models - Auto regressive process - Dynamic process - Optimal estimator

Classification code: 922.2 Mathematical Statistics - 922.1 Probability Theory - 921 Mathematics - 903 Information Science - 731 Automatic Control Principles and Applications - 723 Computer Software, Data Handling and Applications - 461.6 Medicine and Pharmacology

DOI: 10.4028/www.scientific.net/AMM.321-324.829

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132816491376

Title: Numerical investigating nonlinear dynamic responses to rotating deep-hole drilling shaft with multi-span intermediate supports

Authors: Kong, Lingfei1 ; Li, Yan1 ; Zhao, Zhiyuan1/孔令飞;李言;赵智渊

Author affiliation:

1 School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

Corresponding author: Kong, L. (lingfeikong@xaut.edu.cn)

Source title: International Journal of Non-Linear Mechanics

Abbreviated source title: Int J Non Linear Mech

Volume: 55

Issue date: 2013

Publication year: 2013

Pages: 170-179

Language: English

ISSN: 00207462

CODEN: IJNMAG

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: An approach is presented to study the nonlinear dynamic responses to rotating drill shaft with multi-span supports. Based on the finite element method, the drilling shaft is modeled as lots of 2-node Timoshenko shaft element model with free-interface that can take the effect of inertia and shear into consideration. In these cases, the governing equations of drilling shaft system consist of the coupled linear and nonlinear components. According to the feature of such systems, a modified transformation is introduced, by means of which the linear degrees of

freedom of the drilling shaft system are reduced significantly whereas nonlinear degrees of freedom of the system are retained in the physical space. A modified Newton shooting method is used to obtain the periodic trajectories of the dynamic system. The advantage of this method has reduced much of the computational cost in the past, and the hydrodynamic forces of cutting fluid, cutting forces and unbalance forces can easily be added to the system equations. Further, the numerical schemes of this study are applied to a large-scale deep-hole drill machine with two intermediate supports. The periodic dynamic behaviors of the drilling shaft system and the region of unstable rotation are investigated numerically, whereby revealing some interesting phenomena. © 2013 Elsevier Ltd.

Number of references: 30

Main heading: Mathematical transformations

Controlled terms: Cutting fluids - Drills - Dynamic response - Dynamics - Finite element method - Linear transformations - Nonlinear equations - Offshore pipelines - Shear flow

Uncontrolled terms: Deep hole drilling - Drilling shaft - Governing equations - Hydrodynamic forces - Intermediate support - Modal reduction - Nonlinear components - Periodic trajectories

Classification code: 931.1 Mechanics - 921 Mathematics - 619.1 Pipe, Piping and Pipelines - 607.1 Lubricants - 603.2 Machine Tool Accessories - 421 Strength of Building Materials; Mechanical Properties - 408.1 Structural Design, General

DOI: 10.1016/j.ijnonlinmec.2013.06.004

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132816484494

Title: Numerical experiment research of microstructure and loading rate affect on concrete compressive property

Authors: Lei, Guangyu1 ; Dang, Faning1 ; Li, Qian1 ; Pan, Feng1/雷光宇;党发宁;李倩;;

Author affiliation:

1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Lei, G. (lgy1984@stu.xaut.edu.cn)

Source title: Tumu Gongcheng Xuebao/China Civil Engineering Journal

Abbreviated source title: Tumu Gongcheng Xuebao

Volume: 46

Issue: SUPPL.2

Issue date: May 2013

Publication year: 2013

Pages: 79-85

Language: Chinese

ISSN: 1000131X

Document type: Journal article (JA)

Publisher: Editorial Office of China Civil Engineering Journal, 9 Sanliheliu, Beijing, 100835, China

Abstract: In order to study the mechanical behavior of concrete material under the dynamic

loading, through established the microscopic concrete randomly aggregate model, the load-displacement curves and damage failure diagram of the specimen which under dynamic load were obtained. A Contrastive study of numerical simulation and CT real-time scanning tests. The peak intensity of the load-displacement curves as the specimen failure strength was obtained. Four specimens of the same size, which have the different aggregate position, were carried out five different rates. The results showed that when the loading rate improving, the concrete strength was also improving. Loading rate increased to 3 times, at the same time, the peak intensity increased by about 21%. They were not the same growth of proportion. Meanwhile, found that different aggregate position under the condition of the same mix proportion had a certain effect on concrete strength. According to apply different inertial force and elastic parameters on the specimen, obtained the relationship between the specimen and them.

Number of references: 14

Main heading: Aggregates

Controlled terms: Concretes - Dynamic loads - Load testing

Uncontrolled terms: Dynamic strength - Load-displacement curve - Loading rate - Peak point - Random aggregate model

Classification code: 406 Highway Engineering - 408.1 Structural Design, General - 412 Concrete - 483.1 Soils and Soil Mechanics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132816491412

Title: Orthogonal spline collocation methods for the subdiffusion equation

Authors: Li, Can^{1, 2}; Zhao, Tinggang¹; Deng, Weihua¹; Wu, Yujiang^{1, ; ; ;}

Author affiliation:

1 School of Mathematics and Statistics, Lanzhou University, Lanzhou, Gansu 730000, China

2 Department of Applied Mathematics, School of Science, Xi'an University of Technology, Xi'an, Shaanxi 710054, China

Corresponding author: Deng, W. (dengwh@lzu.edu.cn)

Source title: Journal of Computational and Applied Mathematics

Abbreviated source title: J. Comput. Appl. Math.

Volume: 255

Issue date: 2014

Publication year: 2014

Pages: 517-528

Language: English

ISSN: 03770427

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: We develop two kinds of numerical schemes to efficiently solve the subdiffusion equation, which is used to describe anomalous subdiffusive transport processes. The time fractional derivative is first discretized by L1-approximation and the Grunwald-Letnikov approximation, respectively. Then we use the orthogonal spline collocation method to approximate the two semi-discretized subdiffusion equations. The stability and convergence of

time semi-discretization and full discretization schemes are both established strictly for the two schemes. Both of them are unconditionally stable. Numerically the convergent orders in space (including the solution and its first derivative) are four for the Hermite cubic spline approximation, and theoretically we get that at least the solution itself has a fourth order convergent rate.

Extensive numerical results are presented to show the convergent order and robustness of the numerical schemes. © 2013 Elsevier B.V. All rights reserved.

Number of references: 31

Main heading: Partial differential equations

Controlled terms: Convergence of numerical methods - Polynomials

Uncontrolled terms: Convergence - Fractional derivatives - Full discretization - Hermite cubic splines - Orthogonal splines - Stability and convergence - Subdiffusion equations - Unconditionally stable

Classification code: 921 Mathematics

DOI: 10.1016/j.cam.2013.05.022

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20132716471653

Title: Image matching based on improved SIFT algorithm

Authors: Liu, Jia1, 2 ; Fu, Weiping1 ; Wang, Wen1 ; Li, Na1/刘佳;傅卫平;王雯;李娜

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Science, Xi'an University of Science and Technology, Xi'an 710054, China

Corresponding author: Liu, J. (liujia.168@163.com)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 5

Issue date: May 2013

Publication year: 2013

Pages: 1107-1112

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: In order to further improve the robustness and accuracy of SIFT matching algorithm, the SIFT algorithm is improved in the following several aspects. Multi-resolution wavelet transform is performed on the images, the image approximation components that are reconstructed-low-frequency information is adopted to match the images; and a "nested box"-shaped double square neighborhood window is used to divide the neighborhood of a feature point into four areas and construct a 32 dimension feature descriptor vector. Euclidean distance is used to preliminarily ensure the matching points, and then integral image is used to

eliminate the mismatching points caused by the space similarity of the feature points, so that the matching accuracy is improved. Experiments show that the proposed algorithm significantly improves matching accuracy and matching time; especially when the image has more local similar characteristics, all the matching points and the matching correct rate increase.

Number of references: 24

Main heading: Image matching

Controlled terms: Algorithms - Wavelet transforms

Uncontrolled terms: Euclidean distance - Feature descriptors - Integral images - Matching algorithm - Matching points - Multi-resolution wavelet transform - Rate increase - SIFT algorithms

Classification code: 723 Computer Software, Data Handling and Applications - 741 Light, Optics and Optical Devices - 921 Mathematics - 921.3 Mathematical Transformations

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20132816477911

Title: Modeling the impact of subsurface drainage system layout on field hydrology in the Yellow River Delta

Authors: Liu, Wenlong¹ ; Luo, Wan¹ ; Jia, Zhonghua¹ ; Pan, Yanxin¹ ; Yang, Yuzhen² ; Bu, Fanmin²/刘文龙;罗纨;贾忠华;;;

Author affiliation:

1 Northwest Key Laboratories of Water Resources and Environment Ecology, Xi'an University of Technology, China

2 Yellow River Delta Protection and Research Center, China

Source title: WIT Transactions on Engineering Sciences

Abbreviated source title: WIT Trans. Eng. Sci.

Volume: 80

Monograph title: Advances in Industrial Engineering, Information and Water Resources

Issue date: 2013

Publication year: 2013

Pages: 617-627

Language: English

ISSN: 17433533

ISBN-13: 9781845647483

Document type: Conference article (CA)

Publisher: WIT Press, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, United Kingdom

Abstract: Soil salinization is a potential threat to agricultural production in the Yellow River Delta owing to the flat topography, shallow water table depth and high salinity of groundwater in the area. Thus building artificial drainage systems is the key to ensuring production of grain and cotton in the Delta area. Open ditches have to be constructed very wide to maintain stability of their side slopes that are formed with the loose structured sandy soils in the locality. In order to control ground water level and prevent water logging more efficiently, subsurface drainage has been loudly advocated in the Delta area in recent years. In this paper, we studied the impact of the layout of subsurface drainage systems on field hydrology using the DRAINMOD model; we

also discussed the potential influence of subsurface drainage intensity on the ecological environment. The modeling results showed that the shallow drainage layout perform better for water logging prevention, and it has advantages in reducing non-point source pollution and the sea water intrusion threat; under good surface drainage conditions, shallow drainage systems can rapidly lower the water table and reduce water logging time by 73% in wet years. The simulation results also showed that reducing drainage depth from 2.0 m to 1.2 m may reduce subsurface drainage discharge by 24%. Because the shallow drainage system is associated with higher cost, its adoption has to be evaluated with other economic and ecological factors. © 2012 WIT Press.

Number of references: 17

Main heading: Drainage

Controlled terms: Coastal zones - Ecology - Groundwater - Groundwater flow - Hydrology - River pollution - Water levels - Water resources

Uncontrolled terms: DRAINMOD - Field hydrology - Subsurface drainages - Water logging - Yellow River delta

Classification code: 502 Mines and Quarry Equipment and Operations - 471 Marine Science and Oceanography - 454.3 Ecology and Ecosystems - 453 Water Pollution - 614.2 Steam Power Plant Equipment and Operation - 444.2 Groundwater - 442 Flood Control; Land Reclamation - 406 Highway Engineering - 401 Bridges and Tunnels - 444 Water Resources

DOI: 10.2495/AIE120671

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20132716474786

Title: Feature extraction algorithm for palm bio-impedance spectroscopy based on wavelet transform

Authors: Lü, Lin-Tao¹ ; Zhou, Xin-Jun¹ ; Yang, Yu-Xiang¹ ; Tan, Fang¹/吕林涛;周新君;杨宇祥;谭芳

Author affiliation:

1 College of Computer Science and Engineering, Xi'an University of Technology, 710048, China

Corresponding author: Lü, L.-T. (lvlintao@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 327

Monograph title: Advanced Research on Materials, Applied Mechanics and Design Science

Issue date: 2013

Publication year: 2013

Pages: 1576-1579

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857175

Document type: Conference article (CA)

Conference name: 2nd International Conference on Intelligent Materials, Applied Mechanics and Design Science, IMAMD 2013

Conference date: April 13, 2013 - April 14, 2013

Conference location: Guangzhou, China

Conference code: 97684

Sponsor: International Science and Education Researcher Association, China; Beijing Gireida Education Research Center; VIP-Information Conference Center, China

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Based on the palm bio-impedance spectroscopy (BIS) features, this paper suggests a kind of feature extraction algorithm suitable for the palm BIS. The palm BIS under the multi-frequency is measured, a wavelet transform with the characteristics of multi-resolution analysis is selected; each set of palm BIS data is decomposed; the feature subset of wavelet coefficients with the different dimensions is extracted; and then the support vector machine is used to carry out the matching judgment. The testing results indicate that the correct rate of the palm BIS feature extraction algorithm based on the wavelet transform is 91%, and its error rate is 9%, whereby testifying that this algorithm is of an excellent robustness. © (2013) Trans Tech Publications, Switzerland.

Number of references: 4

Main heading: Wavelet transforms

Controlled terms: Algorithms - Design - Feature extraction - Spectroscopy

Uncontrolled terms: A-wavelet transform - Bio-Impedance spectroscopies - Error rate - Feature extraction algorithms - Feature subset - Multi frequency - Wavelet coefficients

Classification code: 408 Structural Design - 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 801 Chemistry - 921 Mathematics - 921.3 Mathematical Transformations

DOI: 10.4028/www.scientific.net/AMM.325-326.1576

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20133316609711

Title: Self-assembled poly(N-methylaniline)-lignosulfonate spheres: From silver-ion adsorbent to antimicrobial material

Authors: Lü, Qiu-Feng¹ ; Zhang, Jia-Yin¹ ; Yang, Jun¹ ; He, Zhi-Wei¹ ; Fang, Chang-Qing² ; Lin, Qilang¹;;方长青;;

Author affiliation:

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Corresponding author: Lü, Q.-F. (qiufenglv@163.com)

Source title: Chemistry - A European Journal

Abbreviated source title: Chem. Eur. J.

Volume: 19

Issue: 33

Issue date: August 12, 2013

Publication year: 2013

Pages: 10935-10944

Language: English

ISSN: 09476539

E-ISSN: 15213765

CODEN: CEUJED

Document type: Journal article (JA)

Publisher: Wiley-VCH Verlag, P.O. Box 101161, Weinheim, D-69451, Germany

Abstract: Self-assembled poly(N-methylaniline)-lignosulfonate (PNMA-LS) composite spheres with reactive silver-ion adsorbability were prepared from N-methylaniline by using lignosulfonate (LS) as a dispersant. The results show that the PNMA-LS composite consisted of spheres with good size distribution and an average diameter of 1.03-1.27 μm , and the spheres were assembled by their final nanofibers with an average diameter of 19-34 nm. The PNMA-LS composite spheres exhibit excellent silver-ion adsorption; the maximum adsorption capacity of silver ions is up to 2.16 g g⁻¹ at an adsorption temperature of 308 K. TEM and wide-angle X-ray results of the PNMA-LS composite spheres after absorption of silver ions show that silver ions are reduced to silver nanoparticles with a mean diameter of about 11.2 nm through a redox reaction between the PNMA-LS composite and the silver ions. The main adsorption mechanism between the PNMA-LS composite and the silver ions is chelation and redox adsorption. In particular, a ternary PNMA-LS-Ag composite achieved by using the reducing reaction between PNMA-LS composite spheres and silver ions can be used as an antibacterial material with high bactericidal rate of 99.95 and 99.99 % for Escherichia coli and Staphylococcus aureus cells, respectively. © 2013 Wiley-VCH Verlag GmbH & Co. KGaA, Weinheim.

Number of references: 57

Main heading: Spheres

Controlled terms: Adsorption - Bacteria - Escherichia coli - Metal ions - Polymerization - Redox reactions - Self assembly - Silver

Uncontrolled terms: Adsorption capacities - Adsorption mechanism - Adsorption temperature - Antibacterial materials - Antimicrobial materials - Lignosulfonates - Silver nanoparticles - Staphylococcus aureus

Classification code: 951 Materials Science - 815.2 Polymerization - 802.3 Chemical Operations - 802.2 Chemical Reactions - 801.2 Biochemistry - 801 Chemistry - 631 Fluid Flow - 547.1 Precious Metals - 533 Ore Treatment and Metal Refining

DOI: 10.1002/chem.201204113

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20132716472288

Title: Rating the customer requirements based on DEMATEL and entropy

Authors: Mingshun, Yang¹ ; Ting, Yu² ; Yanjie, Liang² ; Yubo, Zhang²/杨明顺;;;

Author affiliation:

1 Department of Mechanical, Manufacturing and Automation, School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology (XAUT), Xi'an, China

2 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology (XAUT), Xi'an, China

Corresponding author: Mingshun, Y. (yangmingshun@xaut.edu.cn)

Source title: International Journal of Online Engineering

Abbreviated source title: Int. J. Online Eng.

Volume: 9

Issue: SPL.ISSUE4

Issue date: 2013

Publication year: 2013

Pages: 15-19

Language: English

ISSN: 18681646

E-ISSN: 18612121

Document type: Journal article (JA)

Publisher: Kassel University Press GmbH, Diagonale 10, Kassel, 34127, Germany

Abstract: In the configuration procedure of QFD "Quality Function Deployment", the importance rating of customer requirements as one of the important input parameters is very significant to the determination of the technical characteristics and even to the optimum decision to the whole quality of house as well as the following step of allocation decision-making. In this paper, firstly the drawbacks of the existing methods of determining the importance rating of customer requirements are analyzed. Then with the influence of customer requirement interdependence and market competitive evaluations sufficiently considered, DEMATEL is introduced to deal with self-correlations between customer requirements and Entropy is used to dispose the market competitive evaluations to modify the fundamental importance ratings of the customer requirements, thus a more objective comprehensive fundamental importance rating of the customer requirements can be gained. Finally, one example is given to verify the effectiveness of the presented method.

Number of references: 9

Main heading: Sales

Controlled terms: Commerce - Entropy - Quality function deployment - Rating

Uncontrolled terms: Customer requirements - DEMATEL - Importance rating - Input parameter - Optimum decision

Classification code: 641.1 Thermodynamics - 902.2 Codes and Standards - 911.4

Marketing - 913.3 Quality Assurance and Control

DOI: 10.3991/ijoe.v9iS4.2590

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20132716474189

Title: Object shape classification and scene shape representation for three-dimensional laser scanned outdoor data

Authors: Ning, Xiaojuan^{1, 2}; Wang, Yinghui¹; Zhang, Xiaopeng²/宁小娟;王映辉;张晓鹏

Author affiliation:

1 Xi'an University of Technology, Department of Computer Science Engineering, Xi'an, China

2 CAS Institute of Automation, National Laboratory of Pattern Recognition, Beijing, China

Source title: Optical Engineering

Abbreviated source title: Opt Eng

Volume: 52

Issue: 2

Issue date: 2013

Publication year: 2013

Article number: 024301

Language: English

ISSN: 00913286

E-ISSN: 15602303

CODEN: OPEGAR

Document type: Journal article (JA)

Publisher: SPIE, P.O. Box 10, Bellingham, WA 98227-0010, United States

Abstract: Shape analysis of a three-dimensional (3-D) scene is an important issue and could be widely used for various applications: city planning, robot navigation, virtual tourism, etc. We introduce an approach for understanding the primitive shape of the scene to reveal the semantic scene shape structure and represent the scene using shape elements. The scene objects are labeled and recognized using the geometric and semantic features for each cluster, which is based on the knowledge of scene. Furthermore, the object in scene with a different primitive shape could also be classified and fitted using the Gaussian map of the segmented scene. We demonstrate the presented approach on several complex scenes from laser scanning. According to the experimental result, the proposed method can accurately represent the geometric structure of the 3-D scene. © 2013 Society of Photo-Optical Instrumentation Engineers (SPIE).

Number of references: 17

Main heading: Three dimensional

Controlled terms: Semantics

Uncontrolled terms: Gaussian map - Point cloud data - Primitive shape - Scene representation - Shape classification - Terrestrial laser scanners

Classification code: 902.1 Engineering Graphics - 903.2 Information Dissemination

DOI: 10.1117/1.OE.52.2.024301

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20132816479994

Title: Effects of trigger laser pulse width on the jitter time of GaAs photoconductive semiconductor switch

Authors: Shi, Wei¹ ; Gui, Huaimeng¹ ; Zhang, Lin¹ ; Ma, Cheng¹ ; Li, Mengxia¹ ; Xu, Ming¹ ; Wang, Luyi¹/施卫¹ ; ; ; ; ; ; ; ;

Author affiliation:

1 Applied Physics Department, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Shi, W. (swshi@mail.xaut.edu.cn)

Source title: Optics Letters

Abbreviated source title: Opt. Lett.

Volume: 38
 Issue: 13
 Issue date: July 1, 2013
 Publication year: 2013
 Pages: 2330-2332
 Language: English
 ISSN: 01469592
 E-ISSN: 15394794
 CODEN: OPLEDP
 Document type: Journal article (JA)
 Publisher: Optical Society of America, 2010 Massachusetts Avenue NW, Washington, DC 20036-1023, United States
 Abstract: The effects of trigger laser pulse width on the jitter time of a GaAs photoconductive semiconductor switch (PCSS) is investigated in the experiment. The laser is split into two optical beams by a cross grating to excite two 3 mm gap GaAs PCSSs in parallel at the same time. This work reveals that the jitter time of the GaAs PCSS is reduced as the trigger laser pulse width decreases. Our results overcome a significant obstacle that hinders the testing and theory of GaAs PCSSs in high-time-precision synchronous control. © 2013 Optical Society of America.
 Number of references: 11
 Main heading: Gallium arsenide
 Controlled terms: Jitter - Laser pulses - Photoconductive switches - Semiconducting gallium
 Uncontrolled terms: Cross grating - GaAs - Jitter-time - Laser pulse width - Optical beams - Photoconductive semiconductor switches - Synchronous control
 Classification code: 804 Chemical Products Generally - 744.1 Lasers, General - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 714.2 Semiconductor Devices and Integrated Circuits - 712.1.1 Single Element Semiconducting Materials
 DOI: 10.1364/OL.38.002330
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 16.
 Accession number: 20132816484537
 Title: Seismic energy dissipation control research of the multi-ribbed slab structure using low yield point steel
 Authors: Tian, Jie1 ; Yan, Zhichao1 ; Lu, Junlong1/田洁;;
 Author affiliation:
 1 Xi'an University of Technology, Xi'an 710048, China
 Corresponding author: Tian, J. (tianjie@xaut.edu.cn)
 Source title: Tumu Gongcheng Xuebao/China Civil Engineering Journal
 Abbreviated source title: Tumu Gongcheng Xuebao
 Volume: 46

Issue: SUPPL.1
Issue date: April 2013
Publication year: 2013
Pages: 32-37
Language: Chinese
ISSN: 1000131X
Document type: Journal article (JA)
Publisher: Editorial Office of China Civil Engineering Journal, 9 Sanliheliu, Beijing, 100835, China
Abstract: According to the basic components and construct characteristic of the multi-ribbed slab structure (MRSS), a new kind of the seismic mitigation multi-ribbed composite wall slab was provided by locating low yield point steel panels within concrete sash. Based on an retrogressive three-linear resilience model using degrading control parameters of stiffness and strength degradation and slip pinching for representing reinforced concrete members and a smooth hysteretic model for representing infill silicate blocks as well as infill steel panels respectively, the nonlinear dynamic time-history analysis of the MRSS energy dissipation control systems under horizontal earthquakes has been carried out. The earthquake responses of the systems were calculated. The seismic mitigation effect and adaptability of the low yield point steel panels for MRSS were discussed. The calculating results show that the low yield point steel panels have obvious seismic mitigation effects, which seismic damping rate is 15%~30% under the seismic frequent intensity, and is 30%~70% under the seismic fortification intensity and the seismic seldom intensity for 8 degree seismic region according to China Code for Seismic Design of Buildings, so that a simple and effective seismic energy dissipation measures is provided for the multi-ribbed slab structure.
Number of references: 10
Main heading: Earthquakes
Controlled terms: Concretes - Control system analysis - Energy dissipation - Reinforced concrete - Seismic design - Silicates - Stiffness
Uncontrolled terms: Earthquake response analysis - Low-yield point steels - Multi-ribbed composite wall - Multi-ribbed slab structure - Seismic energy dissipation
Classification code: 812 Ceramics, Refractories and Glass - 731.1 Control Systems - 525.4 Energy Losses (industrial and residential) - 484 Seismology - 951 Materials Science - 422 Strength of Building Materials; Test Equipment and Methods - 414 Masonry Materials - 412 Concrete - 408 Structural Design - 421 Strength of Building Materials; Mechanical Properties
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
17.
Accession number: 20132816483955
Title: Effect of extremely low frequency high-voltage pulsed electric field on ultra-weak luminescence of corns during germination
Authors: Xi, Gang1 ; Liu, Kai1 ; Yang, Yun-Jing2 ; Gao, Yu1/习岗;刘锴;杨运经;高宇
Author affiliation:

1 Department of Applied Physics, Institute of Science, Xi'an University of Technology, Xi'an 710048, China

2 Department of Applied Physics, Northwest Agriculture and Forestry University, Yangling, Shaanxi 712100, China

Corresponding author: Xi, G. (xig@xaut.edu.cn)

Source title: Guangzi Xuebao/Acta Photonica Sinica

Abbreviated source title: Guangzi Xuebao

Volume: 42

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 705-709

Language: Chinese

ISSN: 10044213

CODEN: GUXUED

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: Biological ultra-weak luminescence is an electromagnetic signal from cells, which plays an important role in revealing the mechanism of electromagnetic biological effects. In order to study the biological effects and mechanism of extremely low frequency pulsed electric field, 1 Hz extremely low frequency high-voltage pulsed electric field based on the potential fluctuation frequency of corn cells was used to treat the corns during germination. The results showed that the germination process of corns was accelerated obviously and both the shoot length and root length of germinating corns were significantly longer than the control. Through the measurement and analysis of spontaneous luminescence and delayed luminescence on corns during germination, it was found that the spontaneous luminescence and delayed luminescence integral intensity of germinating corn were significantly increased under the action of 1 Hz extremely low frequency high-voltage pulsed electric field, which indicated that this specific pulsed electric field promoted the DNA synthesis and cell metabolism of the corns during germination. The coupled resonance of pulsed electric field and cell electric field in corn seeds may be the cause of biological effects of the extremely low frequency high-voltage pulsed electric field.

Number of references: 26

Main heading: Luminescence

Controlled terms: Cells - Cultivation - Cytology - Electric fields - Electromagnetism

Uncontrolled terms: Cell potential - Corn germination - Electromagnetic signals - Extremely low frequencies - High-voltage pulsed electric field - Measurement and analysis - Pulsed electric field - Ultra-weak

Classification code: 461.2 Biological Materials and Tissue Engineering - 701 Electricity and Magnetism - 701.1 Electricity: Basic Concepts and Phenomena - 741.1 Light/Optics - 821.3 Agricultural Methods

DOI: 10.3788/gzxb20134206.0705

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20132816483732

Title: Effect of SiC content on the erosion and wear resistance of epoxy/SiC composite

Authors: Xing, Zhi-Guo¹ ; Zhou, Xin-Yuan¹ ; Lyu, Zhen-Lin² ; Zhou, Yong-Xin²/邢志国;周新远; 吕振林;周永欣

Author affiliation:

1 National Key Laboratory for Remanufacturing, Academy of Armored Forces Engineering, Beijing 100072, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xing, Z.-G. (xingzg2011@163.com)

Source title: Cailiao Gongcheng/Journal of Materials Engineering

Abbreviated source title: Cailiao Gongcheng

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 67-71

Language: Chinese

ISSN: 10014381

CODEN: CAGOEW

Document type: Journal article (JA)

Publisher: Beijing Institute of Aeronautical Materials (BIAM), P.O. Box 81, Beijing, 100095, China

Abstract: In order to improve the erosion and wear resistance of large flow parts in factories and mines, the epoxy/SiC composite coating was prepared using SiC particle and epoxy resin. The composite coating with excellent erosion and wear resistance can be solidified quickly and coated conveniently. The article studied the effect of SiC particle content on the erosion and wear resistance of epoxy/SiC composite. The erosion and wear test was carried out on a self-made erosion and wear tester. The erosion and wear morphologies of the composite were observed using SEM. The results showed that different SiC particle content in the composite could change the erosion and wear resistance. When the mass fraction of SiC was 66.66%, the interaction of "shadow effect" and "bonding effect" between the SiC particles and resin achieved the best. Meanwhile, the erosion and wear resistance of the composite was the best. When the content of SiC was optimal, the erosion and wear resistance of the composite was better than that of the white cast iron under the same erosion angle.

Number of references: 16

Main heading: Erosion

Controlled terms: Composite coatings - Composite materials - Epoxy resins - Resins - Silicon carbide - Wear resistance

Uncontrolled terms: Mass fraction - Shadow effects - Sic contents - SiC particles - Wear morphology - Wear test - Wear tester - White cast irons

Classification code: 951 Materials Science - 815.1.1 Organic Polymers - 813.2 Coating Materials - 811 Cellulose, Paper and Wood Products - 804.2 Inorganic Compounds - 483 Soil Mechanics and Foundations - 421 Strength of Building Materials; Mechanical Properties - 415 Metals, Plastics, Wood and Other Structural Materials - 407 Maritime and

Port Structures; Rivers and Other Waterways

DOI: 10.3969/j.issn.1001-4381.2013.06.014

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

19.

Accession number: 20132816486036

Title: Application of near infrared techniques in paper moisture parameter measurement

Authors: Yu, Dian-Hong¹ ; Li, Lin¹ ; Zhao, Kai¹/于殿泓;李琳;赵锴

Author affiliation:

1 School of Mechanical Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yu, D.-H. (dhyu0401@163.com)

Source title: Guangzi Xuebao/Acta Photonica Sinica

Abbreviated source title: Guangzi Xuebao

Volume: 42

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 747-750

Language: English

ISSN: 10044213

CODEN: GUXUED

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: In order to solve the online inspection problem of paper moisture rate technical specification, the moisture rate measuring technique based on the near infrared spectroscopic analysis is researched. The basic theory on the spectral absorption of medium is expatiated and the problems applying the theory to the moisture rate measurement are also analyzed. The key technique that can realize the moisture rate on-line inspection by means of two near infrared spectral lines (measuring spectral line and the reference line) is explored in detail. The measurement project is designed and the role of the main functional module in the project is discussed. The corresponding experimental research showed that, the precision of moisture rate measurement based on near infrared spectroscopic method is less than 0.5%. It is higher than measuring precision of the dry method and the method can be applied to on-line inspection in paper-making process.

Number of references: 10

Main heading: Moisture

Controlled terms: Infrared devices - Inspection - Paper - Spectroscopic analysis - Spectroscopy

Uncontrolled terms: Experimental research - Measurement projects - Moisture rate - Near infrared spectral - Near infrared techniques - On-line inspection - Spectral absorptions - Technical specifications

Classification code: 741.3 Optical Devices and Systems - 801 Chemistry - 801.4 Physical

Chemistry - 811.1 Pulp and Paper - 913.3.1 Inspection

DOI: 10.3788/gzxb20134206.0747

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20.

Accession number: 20132816477934

Title: An empirical study on influence factors of internal personnel resistance risk in ERP implementation change

Authors: Zong, Qianzhu1 ; Su, Ting1 ; Leung, Xiaodou1/;;;

Author affiliation:

1 School of Economics and Management, Xi'an University of Technology, China

Source title: WIT Transactions on Engineering Sciences

Abbreviated source title: WIT Trans. Eng. Sci.

Volume: 80

Monograph title: Advances in Industrial Engineering, Information and Water Resources

Issue date: 2013

Publication year: 2013

Pages: 839-846

Language: English

ISSN: 17433533

ISBN-13: 9781845647483

Document type: Conference article (CA)

Publisher: WITPress, Ashurst Lodge, Ashurst, Southampton, SO40 7AA, United Kingdom

Abstract: Enterprise Resource Planning (ERP) implementation often brings huge changes to enterprises, but employees' resistance caused by changes is often one critical factor for ERP projects failure. Through establishing the conceptual model of internal personnel resistance risks formation mechanism in ERP implementation change, this paper systematically proposed the initial influence factors of internal personnel resistance risks in ERP implementation change, conducted empirical analysis using the factor analysis method. The results showed that the resistance risks influence factors can be classified into five types: the organization common factors, individual common factors, the characteristics factors of decision-making level, the characteristics factors of implementation level, the characteristics factors of operation level. In this way, enterprises can focus on the boycott characteristics of the different management levels, and take countermeasures to reduce the resistance risks of ERP implementation respectively. © 2012 WIT Press.

Number of references: 10

Main heading: Enterprise resource planning

Controlled terms: Industry - Water resources

Uncontrolled terms: Conceptual model - Empirical analysis - Empirical studies - Enterprise resource planning implementations - ERP implementation - Factor analysis method - Formation mechanism - Management level

Classification code: 444 Water Resources - 911 Cost and Value Engineering; Industrial Economics - 912 Industrial Engineering and Management - 912.2 Management - 913 Production Planning and Control; Manufacturing

DOI: 10.2495/AIE120901

Database: Compendex

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20130727 新增 15 条

1.

Accession number: 20132916505149

Title: Research on process parameters of ballscrew manufactured by cold rolling

Authors: Cui, F.K.1 ; Wang, X.Q.1 ; He, X.J.1 ; Li, Y.2 ; Han, Z.R.3/崔凤奎;;;李言;

Author affiliation:

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3 College of Aeronautical Engineering, Shenyang Institute of Aeronautical Engineering, Shenyang 110136, China

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 670

Monograph title: Advanced Design and Manufacturing Technology II

Issue date: 2013

Publication year: 2013

Pages: 123-127

Language: English

ISSN: 10226680

ISBN-13: 9783037856383

Document type: Conference article (CA)

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: To optimize the process parameters of cold rolling the finite element model of metal plastic flow in cold rolling was carried out based on the cold forming principle of ballscrew and rigid-plastic finite element theory. The adaptive mesh refinement was utilized to improve calculation accuracy in large plastic deformation zone. Using lagrangian algorithm the processing of cold rolling is numerically simulated by DEFORM-3D. The appropriate revolution speed is got by analyzing different simulation results such as the maximum stress and maximum strain and flow velocity etc. under different revolution speeds. The appropriate transmission ratio is got by analyzing different simulation results such as the maximum stress and maximum strain and flow velocity etc. under different transmission ratios. The research results provide evidence for process parameters optimization. At the same time those research results lay a foundation of further study of forming mechanism. © (2013) Trans Tech Publications, Switzerland.

Number of references: 7

Main heading: Cold rolling

Controlled terms: Design - Finite element method - Flow velocity - Lagrange

multipliers - Optimization - Research

Uncontrolled terms: Adaptive mesh refinement - Ball-screw - Calculation accuracy - Deform-3d - Finite element theories - Lagrangian algorithm - Large plastic deformation - Process parameters optimizations

Classification code: 408 Structural Design - 535.1.2 Rolling Mill Practice - 631 Fluid Flow - 901.3 Engineering Research - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMR.670.123

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20132916517174

Title: Detecting abrupt change of streamflow at Lintong station of Wei River

Authors: Fan, Jingjing¹ ; Huang, Qiang¹ ; Chang, Jianxia¹ ; Sun, Dongyong² ; Cui, Shen¹ ; 黄强;畅建霞;;

Author affiliation:

1 Xi'an University of Technology, Xi'an 710048, China

2 Chang'an University, Xi'an 710054, China

Corresponding author: Huang, Q. (wresh@mail.xaut.edu.cn)

Source title: Mathematical Problems in Engineering

Abbreviated source title: Math. Probl. Eng.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 976591

Language: English

ISSN: 1024123X

E-ISSN: 15635147

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: According to abrupt diagnosis of runoff, two methods, that is, moving approximate entropy and moving permutation entropy, are used to analyse the abrupt year of the daily river runoff from 1961 to 2006 at Lintong station of Wei River in Loess Plateau. The runoff series are divided into 4 stages. With the analysis of hydrological characters of different stages, we find that there are abrupt changes at the three years 1972, 1983, and 2002. The result shows that moving approximate entropy and moving permutation entropy methods are useful tools for abrupt diagnosis of runoff. The attribution of abrupt change at the Lintong runoff series is primarily due to the reduced precipitation, increased water conservancy project, increased water consumption of industry and agriculture, significantly decreased groundwater table, and increased evaporation.

© 2013 Jingjing Fan et al.

Number of references: 21

Main heading: Agricultural runoff

Controlled terms: Groundwater - Rivers - Water management - Water supply

Uncontrolled terms: Approximate entropy - Different stages - Ground water

table - Loess Plateau - Permutation entropy - River runoffs - Water conservancy projects - Water consumption

Classification code: 444 Water Resources - 446 Waterworks - 446.1 Water Supply Systems - 821.5 Agricultural Wastes

DOI: 10.1155/2013/976591

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132916508938

Title: AlNiCrFexMo0.2CoCu high entropy alloys prepared by powder metallurgy

Authors: Fan, Yuhu1 ; Zhang, Yunpeng1 ; Guan, Hongyan1 ; Suo, Huimin1 ; He, Li1/范玉虎; 张云鹏;关红艳;索会敏;何力

Author affiliation:

1 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, Yunpeng (ypzhang@xaut.edu.cn)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1127-1129

Language: English

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: AlNiCrFexMo0.2CoCu (x=0.5, 1.0, 1.5 2.0) high entropy alloys were prepared by the method of powder metallurgy. Effects of Fe content on microstructure, hardness and comprehensive mechanical properties were investigated. The XRD results show that constituent phases change from bcc+fcc+ σ at x=0.5 to bcc+fcc at x=2.0. The hardness of the alloys varies from HBW3170 MPa at x=0.5 to HBW2290 MPa at x=2.0. The fracture strengths of all the AlNiCrFexMo0.2CoCu alloys are higher than 1100 MPa, and have a good plasticity. Copyright © 2013, Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 7

Main heading: Powder metallurgy

Controlled terms: Density (specific gravity) - Fracture toughness - Hardness - Stainless steel

Uncontrolled terms: Co-Cu alloys - Constituent phasis - Fe content - High entropy alloys - XRD

Classification code: 421 Strength of Building Materials; Mechanical Properties - 536

Powder Metallurgy - 545.3 Steel - 931.2 Physical Properties of Gases, Liquids and

Solids - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20132916512406

Title: Parallel techniques of the sequential codes based on multi-core

Authors: Li, Xiang^{1, 2} ; Zhang, Jing¹;/张璟

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, 710048, China

2 School of Electrical and Information Engineering, Shaanxi University of Science and Technology, Xi'an, 710021, China

Corresponding author: Li, X.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 1673-1684

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)

Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan

Abstract: Multi-core processors are becoming ubiquitous with the continuous development of hardware technology. But many applications are sequential applications and they receive no benefits running on multi-core processors. Addressing this problem, using parallel techniques improve the sequential program running on the multi-core processors. In this paper, we introduced three parallel types of thread level parallelism. Typical DO ALL, DOACROSS, DSWP and PS-DSWP techniques are described. These techniques can explore the parallel from sequential application, but much dependence is not easily predictable or manifests them infrequently by the non-speculative transformation. So many speculative techniques, such as thread level speculation (TLS), Speculation DSWP (SpecDSWP), Speculative PS-DSWP (SpecPS-DSWP) and Interprocedural SpecPS-DSWP (iSpecPS-DSWP), are proposed to break problematic dependences to enhance parallelism. We introduced these speculative parallel techniques and described their execution. SpecDSWP, SpecPS-DSWP and iSpecPS-DSWP are compared from supporting speculation types, memory version and implement steps. At last, some extended TM systems which support TLS techniques are analyzed from thread spawning mechanism, context passing mechanism and sequential ordering. © 2031 Asian Network for Scientific Information.

Number of references: 54

Main heading: Multicore programming

Controlled terms: Parallel processing systems - Program processors

Uncontrolled terms: Multi core - Parallel techniques - Software
pipelining - Thread level speculation - Transactional memory
Classification code: 722.4 Digital Computers and Systems - 723.1 Computer Programming
DOI: 10.3923/itj.2013.1673.1684
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20132916503341

Title: Location of the first yield point and wear mechanism in torsional fretting

Authors: Li, Xiaoyong^{1, 2} ; Wang, Shilong¹ ; Wang, Zhanjiang^{1, 2} ; Li, Pengyang³ ; Wang,
Q.Jane^{1, 2};;李鹏阳;

Author affiliation:

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Mechanical, Shapingba Street, No. 174, Chongqing 400030, China

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United States

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Xi'an 710048, China

Corresponding author: Li, X. (cqulixiaoyong@163.com)

Source title: Tribology International

Abbreviated source title: Tribol Int

Volume: 66

Issue date: 2013

Publication year: 2013

Pages: 265-273

Language: English

ISSN: 0301679X

CODEN: TRBIBK

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: Material wear in the contact area may lead to fatigue failure of a structural component under torsional fretting. It is necessary to investigate the wear mechanisms accompanying torsional fretting, especially during the unloading process. This paper intends to analyze the torsional stress field during loading and unloading processes and to explore the link between fretting wear and the location of material first yield, for which a parametric study on factors influencing this location, such as coefficient of friction and stick zone ratio, is committed. Because the surface shear traction is complex during the unloading process, the subsurface stress field is calculated by means of an efficient semi-analytical method. The relationship between the first yield location and wear mechanism is examined through observations of worn surfaces from a set of torsional fretting experiments. © 2013 Elsevier Ltd.

Number of references: 29

Main heading: Loading

Controlled terms: Abrasion - Deformation - Numerical
methods - Stresses - Tribology - Unloading - Wear of materials

Uncontrolled terms: Coefficient of frictions - Contact
Mechanics - Fretting - Loading and unloading - Semi-analytical methods - Structural component - Sub-surface stress field - Torsional fretting
Classification code: 951 Materials Science - 931 Classical Physics; Quantum Theory; Relativity - 921.6 Numerical Methods - 674.1 Small Marine Craft - 672 Naval Vessels - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties
DOI: 10.1016/j.triboint.2013.06.002
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20132916508937
Title: Effect of 950C thermal exposure on microstructures and properties of Ni-based K403 alloys

Authors: Liu, Jun1, 2 ; Yang, He1 ; Sun, Zhichao1 ; Tang, Wenting2/刘君;杨合;孙志超;唐文亭

Author affiliation:

1 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

2 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yang, H. (yanghe@nwpu.edu.cn)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1123-1126

Language: English

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: Thermal exposure experiments of Ni-based cast superalloy K403 at 950°C for 5, 50 and 100 h were conducted. The effect of thermal exposure on the microstructures and room-temperature mechanical properties of the superalloys K403 was studied. The results show that M6C carbides segregate from intra-grains and grain boundaries, and γ' phases aggregate and grow up with blunted corners. With increasing of thermal exposure time, on the one hand, γ' phases of spherical or nearly spherical shapes are formed from blunted corners and parts of the γ' phase tend to coarsen due to the connection-oriented effect. On the other hand, the offset yielding stress and the tensile strength decrease, while the plasticity improves obviously, resulting from the aggregation and coarsening of the γ' strengthening phase. The room-temperature tensile fracture surface is characterized by the dendritic structure fracture for

K403 alloys before and after the thermal exposure. Whereas the intercrystalline fracture feature, and the shallow and small dimples appear on the tensile section of the thermal-exposed alloys. And the amount of dimples increases as the exposure time increases. Copyright © 2013, Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 14

Main heading: Cerium alloys

Controlled terms: Carbides - Grain boundaries - Mechanical properties - Microstructure - Nickel - Superalloys - Tensile strength

Uncontrolled terms: Dendritic structures - Intercrystalline fractures - Microstructures and properties - Room temperature - Strengthening phase - Tensile fracture surfaces - Thermal exposure - Yielding stress

Classification code: 933.1 Crystalline Solids - 933 Solid State Physics - 812.1

Ceramics - 548.1 Nickel - 951 Materials Science - 547.2 Rare Earth Metals - 531 Metallurgy and Metallography - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 531.2 Metallography

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20132916515331

Title: Mechanical characteristics of high-temperature tunnel based on analytical method

Authors: Liu, N.F.1 ; Li, N.1 ; Liu, J.P.1 ; Yao, X.Ch.1 ; Guo, X.G.2/;;;

Author affiliation:

1 Xi'an University of Technology, Xi'an, China

2 University of Natural Resources and Applied Life Sciences Vienna, Vienna, Austria

Source title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Abbreviated source title: Rock Charact., Model. Eng. Des. Methods - Proc. ISRM SINOROCK Symp.

Monograph title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Issue date: 2013

Publication year: 2013

Pages: 601-606

Language: English

ISBN-13: 9781138000575

Document type: Conference article (CA)

Conference name: 3rd ISRM Symposium on Rock Characterisation, Modelling and Engineering Design Methods, SINOROCK 2013

Conference date: June 18, 2013 - June 20, 2013

Conference location: Shanghai, China

Conference code: 97711

Publisher: Taylor & Francis - Balkema, P.O. Box 447, Leiden, 2300 AK, Netherlands

Abstract: In order to address on the high-geothermal issue of the power tunnel of Bulunkou-Kongur hydropower station, an analytical method was first used to evaluate the

temperature distribution and mechanical characteristics of surrounding rock and lining structures of high temperature tunnel. The transient analysis was applied to study the temperature distribution and the results showed that the temperature distribution was strongly related with the heat transfer and thermal conductivity coefficient. The steady-state method was used to validate the obtained temperature distribution and to further investigate the mechanical characteristics of high-temperature tunnel. The stress of high-temperature pressurized tunnel can be divided into three parts and the percentage of each of them in the coupled stress was also given. A high tensile stress in the circumferential direction was observed in the surrounding rock as well as the lining, subjected to the coupled effect of the temperature load and the internal water pressure. © 2013 Taylor & Francis Group.

Number of references: 15

Main heading: Thermal conductivity

Controlled terms: Design - Geothermal energy - Mechanical properties - Temperature distribution

Uncontrolled terms: Analytical method - Circumferential direction - Hydropower stations - Lining structure - Mechanical characteristics - Steady-state method - Temperature loads - Thermal conductivity coefficient

Classification code: 408 Structural Design - 481.3.1 Geothermal Phenomena - 641.1 Thermodynamics - 951 Materials Science

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20132916515275

Title: Research and application of the relation of dielectric constant and moisture content of red clay

Authors: Lü, Gao¹ ; Li, Ning¹/吕高;李宁

Author affiliation:

1 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an, China

Source title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Abbreviated source title: Rock Charact., Model. Eng. Des. Methods - Proc. ISRM SINOROCK Symp.

Monograph title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Issue date: 2013

Publication year: 2013

Pages: 285-290

Language: English

ISBN-13: 9781138000575

Document type: Conference article (CA)

Conference name: 3rd ISRM Symposium on Rock Characterisation, Modelling and Engineering Design Methods, SINOROCK 2013

Conference date: June 18, 2013 - June 20, 2013

Conference location: Shanghai, China

Conference code: 97711

Publisher: Taylor & Francis - Balkema, P.O. Box 447, Leiden, 2300 AK, Netherlands

Abstract: In a shallow-buried and soft surrounding rock road tunnel, landslides in working face frequently occurred. It is necessary to timely explore the geology in front of the working face such as litho-logy, moisture content and so on. Ground Penetrating Radar can forecast the moisture content in the tunnel construction. In this article, we focus on the analysis of attenuation mechanism of electromagnetic wave in the moist red clay, and establish a mathematical model. By means of large amount of lab experiments, the relation of moisture content and dielectric constant of the red clay has been discussed. A new way of fitting the theoretical formula of red clay to eliminate the errors in data processing is presented. Finally, the results of excavation construction of tunnel in Henan verify the rationality of the curve. Consequently, it can be provided reference material and an extended example for similar project.

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Number of references: 18

Main heading: Tunnels

Controlled terms: Data processing - Design - Electromagnetic waves - Ground penetrating radar systems - Mathematical models - Moisture determination

Uncontrolled terms: Excavation construction - Ground Penetrating Radar - Reference material - Research and application - Shallow buried - Soft surrounding rocks - Theoretical formula - Tunnel construction

Classification code: 944.2 Moisture Measurements - 921 Mathematics - 723.2 Data Processing and Image Processing - 716.2 Radar Systems and Equipment - 711 Electromagnetic Waves - 408 Structural Design - 401.2 Tunnels and Tunneling

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20132916506639

Title: Feature extraction algorithm for palm bio-impedance spectroscopy based on wavelet transform

Authors: Lü, Lin-Tao¹ ; Zhou, Xin-Jun¹ ; Yang, Yu-Xiang¹ ; Tan, Fang¹/吕林涛;;杨宇祥;

Author affiliation:

1 College of Computer Science and Engineering, Xi'an University of Technology, 710048, China

Corresponding author: Lü, L.-T. (lvlintao@xaut.edu.cn)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 325-326

Monograph title: Manufacturing Engineering and Process II

Issue date: 2013

Publication year: 2013

Pages: 1576-1579

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857076

Document type: Conference article (CA)
Conference name: 2013 2nd International Conference on Manufacturing Engineering and Process, ICMEP 2013
Conference date: April 13, 2013 - April 14, 2013
Conference location: Vancouver, BC, Canada
Conference code: 97674
Sponsor: Science and Engineering Institute; University of Ontario Institute of Technology (UOIT), Canada
Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
Abstract: Based on the palm bio-impedance spectroscopy (BIS) features, this paper suggests a kind of feature extraction algorithm suitable for the palm BIS. The palm BIS under the multi-frequency is measured, a wavelet transform with the characteristics of multi-resolution analysis is selected; each set of palm BIS data is decomposed; the feature subset of wavelet coefficients with the different dimensions is extracted; and then the support vector machine is used to carry out the matching judgment. The testing results indicate that the correct rate of the palm BIS feature extraction algorithm based on the wavelet transform is 91%, and its error rate is 9%, whereby testifying that this algorithm is of an excellent robustness. © (2013) Trans Tech Publications, Switzerland.
Number of references: 4
Main heading: Wavelet transforms
Controlled terms: Algorithms - Feature extraction - Industrial engineering - Spectroscopy
Uncontrolled terms: A-wavelet transform - Bio-Impedance spectroscopies - Error rate - Feature extraction algorithms - Feature subset - Multi frequency - Wavelet coefficients
Classification code: 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 801 Chemistry - 912.1 Industrial Engineering - 921 Mathematics - 921.3 Mathematical Transformations
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20132916512422
Title: Analysis and research of the RSA algorithm
Authors: Qi, Na¹ ; Wei, Wei² ; Zhang, Jing² ; Wang, Wei² ; Zhao, Jinwei² ; Li, Junhuai² ; Shen, Peiyi³ ; Yin, Xiaoyan⁴ ; Xiao, Xiangrong⁵ ; Hu, Jie² ; 魏巍;张璟;王伟;;李军怀
Author affiliation:
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3 National School of Software, Xidian University, 710071, Xi'an, Shaanxi, China
4 Department of Computer Science and Technology, Northwest University, Xi'an 710127, China

5 School of Information Engineering, Zhejiang Agriculture and Forest University, China

Corresponding author: Qi, N.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 1818-1824

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)

Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan

Abstract: With the continuous development of society and the prevalence of computer and network technology. How to ensure the security of information in the course of transmission have become the most important things for people at present. With this background, we studied how to realize encryption and decryption of the RSA (Initials of Ron Rivest, Adi Shamir, LenAdleman) encryption technology. This study mainly introduces the application of RSA algorithm in encryption and decryption, mentions the technology of digital signature. Also introduces in the process of implementation of RSA algorithm in Visual Studios environment and operation results. Using this system for encryption and decryption of information, theoretically, good results were obtained in safety and reliability. © 2031 Asian Network for Scientific Information.

Number of references: 15

Main heading: Cryptography

Controlled terms: Algorithms - Applications - Authentication - Electronic document identification systems - Security of data

Uncontrolled terms: Computer and networks - Continuous development - Decrypt - Encryption and decryption - Encryption technologies - RSA algorithms - Security - Visual studios

Classification code: 451.2 Air Pollution Control - 723 Computer Software, Data Handling and Applications

DOI: 10.3923/itj.2013.1818.1824

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20132916508787

Title: Effects of warping dams of different storage capacity configuration proportion on reducing sediment base

Authors: Ran, Dachuan¹ ; Yao, Wenyi¹ ; Li, Zhanbin² ; Luo, Quanhua³/冉大川;姚文艺;李占斌;罗全华

Author affiliation:

1 Yellow River Institute of Hydraulic Research, Yellow River Conservancy Commission, Zhengzhou 450003, China

2 Faculty of Water Resources and Hydraulic Power, Xi'an University of Technology, Xi'an 710048, China

3 Xifeng Soil and Water Conservation Experimental Station, Yellow River Conservancy Commission, Qingyang 745000, China

Corresponding author: Ran, D. (xfrdc@sohu.com)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 12

Issue date: June 15, 2013

Publication year: 2013

Pages: 154-162

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: This paper analyzed the effect of warping dams of different configuration ratios on reducing sediment and major factors contribution rate by mathematical statistics method and the investigation data in Dali River basin in middle of Yellow River. The investigation data showed land area of different type dams increased with time in Dali River basin, but presented obviously slow increasing in the near future. Warping dams reduced mean flood amount with 18.4 million m³ and sediment 12.9 million t during 1960-2002 annually, and the ratio of different type dams was 80.1%, 14.6%, 5.3%, respectively. The period of biggest reduction of sediment with 30.2% was 1990 s, and the responding ratio of different type warping dams was 1.84:2.37:5.79. The sediment decrement of large-scale soil-retaining dam was 5.5 times than that of medium dam, and was 15 times than that of small dams. The optimized proportion of distributions of warping dams for achieving continuous sediment reduction in the future in drainage basin was 1:3.0:7.0. The maximum amount of sediment reduction by different types of soil retaining dams correlated closely with flood season rainfall and 1-day maximum rainfall. Within the sediment reduction capability of warping dams, the amount of sediment reduction increased with rainfall intensity, presenting the characteristics of "the more sediment reduction with the more incoming sediment". Reducing sediment of the warping dams had a proportionality relationship with observed flood in different periods. Since 1990s, sediment reduction was about 0.23 t/m³ of unit cubic meter of flood discharge. Sediment reduction amount was about 0.19t/m³ per unit cubic meter of flood discharge during 1970s and 1980s, and the amount was about 0.23 t/m³ since 1990s. The warping dams reduced sediment increased with the value of 3 major factors. The contribution ratio of the factors was in the order: the flood amount &le rain season rainfall &le 1-day maximum rainfall.

Number of references: 26

Main heading: Sediments

Controlled terms: Dams - Floods - Rain - Statistics - Watersheds

Uncontrolled terms: Configuration ratio - Contribution rate - Contribution ratios - In-coming sediments - Mathematical statistics methods - Rainfall intensity - Sediment reduction - Storage capacity

Classification code: 441.1 Dams - 443.3 Precipitation - 444.1 Surface Water - 483 Soil Mechanics and Foundations - 914.1 Accidents and Accident Prevention - 922.2

Mathematical Statistics

DOI: 10.3969/j.issn.1002-6819.2013.12.020

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20132916517275

Title: Design and analysis of new spectroscopic system of Raman lidar for detection of atmospheric water vapor

Authors: Wang, Hong-Wei¹ ; Hua, Deng-Xin¹ ; Wang, Yu-Feng¹ ; Gao, Peng¹ ; Zhao, Hu¹ / 王红伟;华灯鑫;王玉峰;高朋;赵虎

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Hua, D.-X. (dengxinhua@xaut.edu.cn)

Source title: Wuli Xuebao/Acta Physica Sinica

Abbreviated source title: Wuli Xuebao

Volume: 62

Issue: 12

Issue date: June 20, 2013

Publication year: 2013

Article number: 120701

Language: Chinese

ISSN: 10003290

CODEN: WLHPAR

Document type: Journal article (JA)

Publisher: Institute of Physics, Chinese Academy of Sciences, P.O. Box 603, Beijing, 100190, China

Abstract: A new ultraviolet Raman lidar system is proposed and developed for detecting atmospheric water vapor and aerosol study. The combination of dichroic mirrors and narrow-band interference filters is used as high-performance spectroscopic system to obtain the fine-separation and high-efficiency extraction of Mie-Rayleigh scattering signals, the vibrational Raman scattering signal of H₂O and N₂. By the American standard model and a set of atmospheric scattering signal model, the signal-to-noise ratio (SNR) and the water vapor measurement error are simulated and analyzed. The preliminary experiments are carried out at nighttime in Xi'an area for detecting the atmospheric water vapor and aerosols. Taking a set of the atmospheric returned signals measured under cloudy weather for example, the profiles of atmospheric backscatter ratio and water vapor mixing ratio are retrieved, and the SNR profiles of

the three channels are discussed and verify that this configuration can achieve a high rejection rate (10⁻⁷) to Mie-Rayleigh scattering. The theoretical and experimental results show that water vapor detection error of less than 15% can be obtained under a backscatter ratio of 17, which demonstrates the feasibility of the system for the atmospheric aerosol and water vapor measurements. © 2013 Chinese Physical Society.

Number of references: 20

Main heading: Signal detection

Controlled terms: Atmospheric aerosols - Backscattering - Computer simulation - Mixing - Moisture - Optical radar - Rayleigh scattering - Signal to noise ratio - Spectroscopic analysis - Water vapor

Uncontrolled terms: Atmospheric backscatters - Atmospheric water vapor - Narrowband interference filters - Raman LIDAR - Signal to noise ratio (SNR) - Theoretical and experimental - Water vapor measurement - Water vapor mixing ratio

Classification code: 802.3 Chemical Operations - 801 Chemistry - 723.5 Computer Applications - 716.2 Radar Systems and Equipment - 716.1 Information Theory and Signal Processing - 711 Electromagnetic Waves - 641 Heat and Mass Transfer; Thermodynamics

DOI: 10.7498/aps.62.120701

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20132916512425

Title: Research of data quality assurance about ETL of telecom data warehouse

Authors: Wei, Sun¹; Wei, Wei²; Zhang, Jing²; Wang, Wei²; Zhao, Jinwei²; Li, Junhui²; Shen, Peiyi³; Yin, Xiaoyan⁴; Xiao, Xiangrong⁵; Hu, Jie²/孙伟;魏巍;张璟;李军怀;沈沛意;;;

Author affiliation:

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- 2 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
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- 5 School of Information Engineering, Zhejiang Agriculture and Forest University, China

Corresponding author: Wei, S.

Source title: Information Technology Journal

Abbreviated source title: Inf. Technol. J.

Volume: 12

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 1839-1844

Language: English

ISSN: 18125638

E-ISSN: 18125646

Document type: Journal article (JA)

Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan

Abstract: In recent years, with the development of data warehouse and Web technology, more and more attention has been paid to multiple applications of the data in warehouse. However, data quality issue is one of the biggest obstacles to the success using of data warehouse project for many enterprises. So a data audit model is proposed and the relevant methods are studied in the study based on the characteristics of the telecommunications industry. Further, a three data layer audit method, consisted of audit mode data file level, record level and index level, is constructed during Extraction Transformation Loading (ETL) process. It can effectively improve the data quality of data warehouse. © 2031 Asian Network for Scientific Information.

Number of references: 25

Main heading: Loading

Controlled terms: Data reduction - Data warehouses - Management - Metadata - Quality assurance - Telecommunication industry

Uncontrolled terms: Data audits - Data files - Data quality - ETL - Extraction transformation loadings - Multiple applications - Telecommunications industry - Web technologies

Classification code: 913.3 Quality Assurance and Control - 912.2 Management - 723 Computer Software, Data Handling and Applications - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 672 Naval Vessels

DOI: 10.3923/itj.2013.1839.1844

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20132916508958

Title: Effects of Y on microstructure and mechanical properties of Mg-8Li-4Zn-xY magnesium alloy and its 1 mm thick sheet

Authors: Xu, Chunjie1 ; Ma, Tao1 ; Wang, Jincheng2 ; Tu, Tao1 ; Zhang, Zhongming1/徐春杰; 马涛;王锦程;屠涛;张忠明

Author affiliation:

1 Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

Corresponding author: Xu, Chunjie (xuchunjie@gmail.com)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1226-1230

Language: Chinese

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: As-cast ingots of Mg-8Li-4Zn-xY magnesium alloy were prepared by lithium flux protection in an electric-resistance furnace, and 1 mm thick sheets were prepared by forward extrusion. Microstructures and mechanical properties of the alloy were investigated with OM, SEM equipped with an energy-dispersive X-ray spectroscopy (EDS), XRD and the HV-120 hardness Vickers. The results show that the matrix of as-cast Mg-8Li-4Zn-xY alloy consists of α -Mg (hexagonal close-packed) and β -Li (body-centered cubic) phase. The precipitation strengthening phase particles and compounds are Mg₂Zn₁₁, Mg_{72.05}Zn_{27.95}, MgZn, Mg₂Y, MgY and unknown phase. The matrixes of Mg-8Li-4Zn-xY magnesium alloy ingots are refined and the amount of the precipitation strengthening phase are enhanced along with the yttrium content increasing, but there is no appreciable changing of the matrix size, appearance and dispersion precipitation phases in β -Li phase. On the contrary, the α -Mg phases wrapped by β -Li phase are elongated and refined during the extrusion process, and paralleled to the extrusion direction as stripped. The β -Li phases could coordinate plastic deformation and synchronize dynamic recrystallization, and the strengthening phases are of uniform distribution on the crystal boundary. The ingots and 1 mm thick sheets of Mg-8Li-4Zn-xY alloys are strengthened and the hardnesses are also enhanced in different extent along with the yttrium content increasing.

Number of references: 18

Main heading: Lithium

Controlled terms: Alloys - Dynamic recrystallization - Energy dispersive spectroscopy - Extrusion - Hardness - Ingots - Magnesium alloys - Mechanical properties - Microstructure - Precipitation (chemical) - Yttrium - Yttrium alloys - Zinc

Uncontrolled terms: Energy dispersive x-ray spectroscopy - Hexagonal close-packed - Mg-Li alloy - Microstructure and mechanical properties - Microstructures and mechanical properties - Precipitation strengthening - Strengthening phasis - Uniform distribution

Classification code: 933 Solid State Physics - 802.3 Chemical Operations - 801 Chemistry - 549 Nonferrous Metals and Alloys - 951 Materials Science - 546.3 Zinc and Alloys - 534.2 Foundry Practice - 531.1 Metallurgy - 421 Strength of Building Materials; Mechanical Properties - 535.2.2 Metal Forming Practice

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20132916515349

Title: The characters of freeze-thaw deformation and the treatment technics of road slopes in plateau and mountain area

Authors: Xu, Shuanhai¹ ; Li, Ning² ; Cao, Zubao³ ; Liu, Dan⁴;/李宁¹;;;

Author affiliation:

- 1 Xi'an University of Technology, Xi'an Research Institute of China, Coal Technology and Engineering Group, Xi'an, Shaanxi, China
- 2 Xi'an University of Technology, Xi'an, Shaanxi, China
- 3 Xi'an Research Institute of China, Coal Technology and Engineering Group, Xi'an, Shaanxi, China
- 4 Zhengzhou University, Zhengzhou, Henan, China

Source title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Abbreviated source title: Rock Charact., Model. Eng. Des. Methods - Proc. ISRM SINOROCK Symp.

Monograph title: Rock Characterisation, Modelling and Engineering Design Methods - Proceedings of the 3rd ISRM SINOROCK 2013 Symposium

Issue date: 2013

Publication year: 2013

Pages: 703-709

Language: English

ISBN-13: 9781138000575

Document type: Conference article (CA)

Conference name: 3rd ISRM Symposium on Rock Characterisation, Modelling and Engineering Design Methods, SINOROCK 2013

Conference date: June 18, 2013 - June 20, 2013

Conference location: Shanghai, China

Conference code: 97711

Publisher: Taylor & Francis - Balkema, P.O. Box 447, Leiden, 2300 AK, Netherlands

Abstract: According to the analysis, there are five types of deformation failure of the slopes along the road which are shallow freeze-thaw creeping of gravel soil slopes in plateau meadow area, cracking of soft rock high slopes by weathering and freeze-thaw cycling, freeze-thaw slump along the planes of consequent rock slopes, freeze-thaw collapse of big colluvial gravel slopes and freeze-thaw slide along basal rock of residual gravel soil slopes. Grassing, water draining, SNS flexible protection net, concrete insert repair, anchored retaining wall or concrete pier, root pile and anti-sliding pile are selected to treat these deformation failures based on different situation.

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Number of references: 10

Main heading: Slope stability

Controlled terms: Concretes - Deformation - Design - Freezing - Indium plating - Piles - Repair - Roads and streets - Rocks - Weathering

Uncontrolled terms: Anchored retaining walls - Consequent rock slope - Deformation failure - Freeze-thaw - Freeze-thaw cycling - Geological disaster - Road slope - Treatment technics

Classification code: 822.2 Food Processing Operations - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 481.1 Geology - 422 Strength of Building Materials; Test Equipment and Methods - 913.5 Maintenance - 421 Strength of Building Materials; Mechanical Properties - 408.2 Structural Members and Shapes - 408 Structural

Design - 406.2 Roads and Streets - 412 Concrete

Database: Compendex

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20130803 新增 11 条

1.

Accession number: 20133016523803

Title: Vertical static compression performance of honeycomb paperboard

Authors: Guo, Yanfeng^{1, 2} ; Becker, Wilfried² ; Xi, Wencai³/郭彦峰

Author affiliation:

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2 Dept. of Mechanical Engineering, Darmstadt, Darmstadt University of Technology, Germany

3 Dept. of Packaging Engineering, Beijing Institute of Graphic Communication, Beijing, China

Corresponding author: Guo, Y. (guoyf@xaut.edu.cn)

Source title: International Journal of Materials Research

Abbreviated source title: Int. J. Mater. Res.

Volume: 104

Issue: 6

Issue date: 2013

Publication year: 2013

Pages: 598-602

Language: English

ISSN: 18625282

Document type: Journal article (JA)

Publisher: Carl Hanser Verlag, Kolbergerstrasse 22, Munchen, D-81679, Germany

Abstract: This paper evaluates the compression deformation behaviour and energy absorbing properties of honeycomb paperboards with different thicknesses under homogeneous vertical static compression loading. Each piece of the static compression stress and strain curves of the honeycomb paperboards is similar and comprises three parts of compression deformation (elastic region, plateau region, and densification region), which reflects the mechanical properties such as approximately linear elastic deformation, large plastic deformation with local collapse and densification. The unit volume deformation energy and strain curves and two kinds of static compression cushioning curves show that within the elastic region and plateau region of the stress and strain curves, the honeycomb paperboards hold better energy absorbing properties and the change of the cushioning factor with an increase in the thickness of honeycomb paperboards is very small.

Number of references: 13

Main heading: Loading

Controlled terms: Energy absorption - Honeycomb structures - Paperboards - Strain

Uncontrolled terms: Absorbing properties - Compression deformation - Cushioning factor - Honeycomb paperboard - Large plastic deformation - Static compression - Static compression stress - Stress and strain

Classification code: 408.2 Structural Members and Shapes - 421 Strength of Building Materials; Mechanical Properties - 672 Naval Vessels - 811.1 Pulp and Paper - 931.3 Atomic and Molecular Physics - 951 Materials Science

DOI: 10.3139/146.110896

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133016534351

Title: Design & development of multi-mode integrated timing device

Authors: Ke, Xizheng1 ; Liu, Juanhua1 ; Li, Jianxun1, 2/柯熙政;;李建勋

Author affiliation:

1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Institute of Optics and Precision Mechanics, CAS, Xi'an 710119, China

Corresponding author: Ke, X. (xzke@xaut.edu.cn)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1209-1217

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: A multi-mode combined timing device was designed based on multi-scale data fusion theory, which can output the time frequency signal with higher precision by combining the GPS, GLONAS and Beidou timing signals. Firstly, the GPS, GLONAS and Beidou timing signals are decomposed respectively in different wavelet scales. Secondly, the wavelet coefficients of these signals in the same scale are synthesized with wavelet weighting method scale by scale. Thirdly, inverse wavelet transform is used to reconstruct the signal that represents the timescale. The new timescale is in step with UTC theoretically. Test result shows that after disciplining the local oscillators, the frequency stability of the device reaches to 10⁻¹², which is higher than that of the single-mode device by one order of magnitude.

Number of references: 15

Main heading: Signal processing

Controlled terms: Data fusion - Radio navigation - Timing devices - Wavelet transforms

Uncontrolled terms: Combined timing - Different wavelets - Inverse wavelet transforms - Local oscillators - Multi-scale datum - Time frequency signals - Wavelet coefficients - Weighting methods

Classification code: 716.1 Information Theory and Signal Processing - 716.3 Radio Systems

and Equipment - 723.2 Data Processing and Image Processing - 921.3 Mathematical Transformations - 943.3 Special Purpose Instruments

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20132916520870

Title: Research of characteristics extraction based on dynamic pressure signal

Authors: Liu, Wei^{1, 2} ; Liu, Hong Zhao¹;/刘宏昭

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Computer Science and Technology Department, Shaanxi Xueqian Normal University, Xi'an 710061, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 329

Monograph title: Advanced Technologies on Measure and Diagnosis, Manufacturing Systems and Environment Engineering

Issue date: 2013

Publication year: 2013

Pages: 354-358

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857236

Document type: Conference article (CA)

Conference name: 3rd International Conference on Intelligent Structure and Vibration Control, ISVC 2013

Conference date: March 22, 2013 - March 24, 2013

Conference location: Chongqing, China

Conference code: 97846

Sponsor: Shanghai Jiao Tong University; Nanyang Normal University; Hebei Polytechnic University; Henan Institute of Science and Technology; Chongqing University of Arts and Sciences; et al

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The accuracy of pattern recognition was determined by the feature selection, and two methods of the characteristic description were discussed. The results show that the statistical characteristics could be used as a dynamic pressure signal descriptor, and the oscillation characteristic of curve is not suitable for describing dynamic pressure signal by itself. The selection of descriptors of dynamic pressure signal is the precondition to identify the leak signal and the non-leak signal effectively. © (2013) Trans Tech Publications, Switzerland.

Number of references: 4

Main heading: Pattern recognition

Controlled terms: Mechanics

Uncontrolled terms: Characteristics extraction - Dynamic pressure signals - Dynamic pressures - Graphic characteristics - Leak signals - ON dynamics - Oscillation characteristics - Statistical characteristics

Classification code: 716 Telecommunication; Radar, Radio and Television - 931.1 Mechanics

DOI: 10.4028/www.scientific.net/AMM.329.354

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133016535779

Title: Research on automatic identification for the leakage signal of petroleum pipeline

Authors: Liu, Wei¹ ; Liu, Hongzhao²; 刘宏昭

Author affiliation:

1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710001, China

2 Department of Computer Science and Technology, Shaanxi Xueqian Normal University, Xi'an, Shaanxi, 710001, China

Source title: Sensors and Transducers

Abbreviated source title: Sensors Transducers

Volume: 21

Issue: SPEC.ISS.5

Issue date: 2013

Publication year: 2013

Pages: 147-152

Language: English

E-ISSN: 17265479

Document type: Journal article (JA)

Publisher: International Frequency Sensor Association, 46 Thorny Vineway, Toronto, ON M2J 4J2, Canada

Abstract: The waveform of dynamic pressure wave contains the safety information of petroleum pipeline. The complete automatic identification program for the leakage signal of petroleum pipeline was proposed based on the characteristics of the dynamic pressure wave signal from the point of view of the signal processing. Wavelet and empirical mode decomposition method were adopted to deny the signals collected by dynamic pressure transmitter respectively. We tried to use the statistical characteristics of the one-dimensional digital sequence to describe the signal. Support vector machine method which is suitable to small size sample was selected to automatically identify the leaked signal of petroleum pipeline. And a relatively high signal identification rate was acquired. © 2013 IFSA.

Number of references: 8

Main heading: Petroleum pipelines

Controlled terms: Automation - Signal processing - Support vector machines

Uncontrolled terms: Automatic identification - Dynamic pressures - EMD - Empirical mode decomposition method - Safety

information - Statistical characteristics - Support vector machine method - SVM
Classification code: 619.1 Pipe, Piping and Pipelines - 716.1 Information Theory and Signal
Processing - 723 Computer Software, Data Handling and Applications - 731 Automatic
Control Principles and Applications - 732 Control Devices

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133016534004

Title: The cross-layer design of wireless mesh networks based on multimedia services

Authors: Sun, Qindong¹ ; Zhang, Benliang¹ ; Yang, Min¹ ; Wang, Qian¹/孙钦东;

Author affiliation:

1 Key Lab. for Network Computing and Security of Shaanxi Province, Xi'an University of
Technology, Xi'an 710048, China

Corresponding author: Sun, Q. (sqd@xaut.edu.cn)

Source title: Journal of Computational Information Systems

Abbreviated source title: J. Comput. Inf. Syst.

Volume: 9

Issue: 11

Issue date: June 1, 2013

Publication year: 2013

Pages: 4495-4504

Language: English

ISSN: 15539105

Document type: Journal article (JA)

Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States

Abstract: In this paper, we have introduced a cross-layer design model which is based on multimedia services in order to favor the QoS demand in wireless mesh networks. By means of this model the relevant parameters in each layer of the whole network protocol stacks have been considered. Parameters Link consumption and packet error rate in the wireless transmission have been optimal controlled to enhance the throughput of wireless and optimize the overall performance of wireless mesh network. The experimental results show that compared with the general model, the average throughput of the multimedia transmission has increased more than 35% based on the cross-layer model proposed in this paper. Consequently the overall performance of the network has been optimized. © 2013 by Binary Information Press.

Number of references: 19

Main heading: MESH networking

Controlled terms: Multimedia services - Network
protocols - Optimization - Wireless mesh networks (WMN)

Uncontrolled terms: Average throughput - Cross-layer design - Cross-layer
models - Link consumption - Multimedia transmissions - Network protocol
stack - Packet error rates - Wireless transmissions

Classification code: 722 Computer Systems and Equipment - 723 Computer Software,
Data Handling and Applications - 921.5 Optimization Techniques

DOI: 10.12733/jcis6189

Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133016533857

Title: Mixing mechanism of multiphase flow and acceleration performance in single inlet rear-mixed jet flow crushing

Authors: Wan, Jiwei¹ ; Niu, Zhengming¹ ; Liao, Weili¹ ; Niu, Zhunong²/万继伟;牛争鸣;廖伟丽;牛助农

Author affiliation:

1 Institute of Water Resources and Hydroelectric Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

2 Shaanxi Gas Group Co., Ltd., Xi'an 710016, Shaanxi, China

Corresponding author: Wan, J. (sin45jerry@sina.com)

Source title: Huagong Xuebao/CIESC Journal

Abbreviated source title: Huagong Xuebao

Volume: 64

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 2418-2427

Language: Chinese

ISSN: 04381157

CODEN: HUKHAI

Document type: Journal article (JA)

Publisher: Chemical Industry Press, No. 3 Huixinli, Chaoyangqu, Beijing, 100029, China

Abstract: In order to deeply understand the super fine crushing technology of rear-mixed high-speed water jet flow, the mixing and jetting behavior of gas-liquid-solid three phases in acceleration tube with various diameter were investigated by using numerical simulation and crushing experiment methods. Mixing mechanism and acceleration performance of multiphase mixture jet flow were explored, and particles distributions in acceleration space were obtained. The result showed that aeration and entrainment effects of jet flow turbulent motion were the inherent mechanism of mixed attached phase. There existed many partition zones in the rear-mixed jet flow for particle acceleration. Whereby the nearer to the potential flow zone, the stronger the impact energy. Accordingly, optimizing configuration of the optional nozzle diameter with the acceleration tube diameter could force the particles near or enter the potential flow zone, whereby effectively improving grinding yield efficiency. The particles in space distribution within the acceleration tube were in the highest contents in high-efficiency acceleration zones of the outer and inner layers. As a result, the nearer to the potential flow zone, the fewer the particles. The particle contents in the air flow zone increased with increasing acceleration tube diameter. It was difficult for the particles to enter the ideal acceleration zone so that most of the particles were accelerated by relying on the high-efficiency acceleration zone of the inner and outer layers. In the case of maintaining the flowing morphological state of free jet flow, the grinding yield efficiency decreased with increasing acceleration tube diameter. Accordingly small tube diameter was of better constraint and concentration functions for water jet flow energy and

particle motion space. © All Rights Reserved.

Number of references: 20

Main heading: Acceleration

Controlled terms: Crushing - Grinding (machining) - Inlet
flow - Jets - Mixing - Potential flow - Tubes (components)

Uncontrolled terms: Acceleration performance - Entrainment effects - High-speed
water jets - Jet flow - Mixing mechanisms - Multi-phase mixtures - Particle
acceleration - Particles distribution

Classification code: 606.2 Abrasive Devices and Processes - 616.1 Heat Exchange
Equipment and Components - 631.1 Fluid Flow, General - 802.3 Chemical
Operations - 931.1 Mechanics

DOI: 10.3969/j.issn.0438-1157.2013.07.016

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133016530808

Title: Forming Flaws Analysis of Lead Screw Cold Roll-Beating Based on Stress-Strain
Evolution

Authors: Wangyun, He1 ; Yan, Li1 ; Mingshun, Yang1 ; Ming, Wang1/;李言;杨明顺;王明

Author affiliation:

1 Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

Source title: Sensors and Transducers

Abbreviated source title: Sensors Transducers

Volume: 19

Issue: SPEC.ISS.2

Issue date: 2013

Publication year: 2013

Pages: 74-82

Language: English

E-ISSN: 17265479

Document type: Journal article (JA)

Publisher: International Frequency Sensor Association, 46 Thorny Vineway, Toronto, ON
M2J 4J2, Canada

Abstract: Cold roll beating is an advanced precision plastic forming technology. The principle
of lead screw cold roll beating was briefly introduced and the dynamic model of single beating
process of lead screw cold roll beating is established. Evolutions of the principal stress,
hydrostatic pressure and the principal strain in the deformable area are studied. Positions of the
defects are further defined and the reasons of these are analyzed according to the stress-strain
evolution. And the corresponding measures are put forward to prevent surface defects. © 2013
IFSA.

Number of references: 10

Main heading: Screws

Controlled terms: Hydrostatic pressure - Lead screws - Surface defects

Uncontrolled terms: Beating process - Cold roll-beating - Corresponding

measures - Plastic forming - Principal strain - Principal stress - Stress-strain
Classification code: 421 Strength of Building Materials; Mechanical Properties - 605 Small
Tools and Hardware - 631.1.1 Liquid Dynamics - 951 Materials Science
Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133016534300

Title: Testing for spatial-temporal nonstationarity based on geographically and
temporally weighted regression model

Authors: Xiao, Yan-Ting^{1, 2}; Tian, Zheng¹; Wei, Yue-Song³/肖燕婷;田铮;魏岳嵩

Author affiliation:

1 Department of Applied Mathematics, Northwest Polytechnical University, Xi'an 710072,
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2 Department of Applied Mathematics, Xi'an University of Technology, Xi'an 710054, China

3 School of Mathematical Science, Huaibei Normal University, Huaibei 235000, China

Corresponding author: Xiao, Y.-T.

Source title: Xitong Gongcheng Lilun yu Shijian/System Engineering Theory and Practice

Abbreviated source title: Xitong Gongcheng Lilun yu Shijian

Volume: 33

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1537-1542

Language: Chinese

ISSN: 10006788

CODEN: XGLSE2

Document type: Journal article (JA)

Publisher: Systems Engineering Society of China, Xitong Yanjiusuo, Beijing, 100080,
China

Abstract: In geographically and temporally weighted regression model, the estimates of the
coefficients are obtained by geographically weighted fitting technique where spatial-temporal
weighted distance is used in weighted matrix. Then, appropriate statistics for testing the
temporal and spatial nonstationarity of the estimated coefficients are proposed and the p values
are calculated with the third-order moment X2 approximation method. Finally, the simulation
example and real example show that the test methods are valid.

Number of references: 9

Main heading: Mathematical models

Controlled terms: Approximation theory - Buoyancy - Regression analysis - Testing

Uncontrolled terms: Approximation methods - Fitting

techniques - Non-stationarities - Simulation example - Temporal and spatial - Third
order moment - Weighted distance - Weighted regression

Classification code: 423.2 Non Mechanical Properties of Building Materials: Test

Methods - 631 Fluid Flow - 921 Mathematics - 921.6 Numerical Methods - 922.2

Mathematical Statistics

Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20132916521094

Title: The gradual optimization of grounding grip corrosion rate forecasting model

Authors: Yan, Ai Jun^{1, 2} ; Du, Jing Yi³ ; Liu, Rui² ; Li, Na³ ; Tang, Xiao Hua³ ; Liu, Lei² ; Li, Zhi Zong²/闫爱军,,,,,,,,,

Author affiliation:

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2 The Key Laboratory of Corrosion and Protection, Materials Science and Engineering College, Xi'an University of Technology, Xi'an 710048, China

3 College of Electrical and Control Engineering, Xi'an University of Science and Technology, Xi'an 710054, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 330

Monograph title: Materials Engineering and Automatic Control II

Issue date: 2013

Publication year: 2013

Pages: 1075-1079

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857250

Document type: Conference article (CA)

Conference name: 2nd International Conference on Materials Engineering and Automatic Control, ICMEAC 2013

Conference date: May 18, 2013 - May 19, 2013

Conference location: Shandong, China

Conference code: 97847

Sponsor: Shandong Jianzhu University; Shandong University; China University of Petroleum; Shandong University of Science and Technology; University of Jinan; et al

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: A forecasting model of the gradual optimization algorithm is established to predict substation grounding grip corrosion rate. In this model, according to the "Over Fitting" phenomenon in the neural network limited soil corrosion sample data are randomly combined and the training stops when the training error and validation error are equal. The model of smaller errors will be chosen as the optimal model. As shown in the simulation, the general performance and fitting accuracy from the forecasting model meet requirements. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Computer simulation

Controlled terms: Algorithms - Automation - Control - Corrosion
rate - Forecasting - Optimization - Process control
Uncontrolled terms: Fitting accuracy - Forecasting models - Grounding
grips - Optimal model - Optimization algorithms - Substation grounding - Training
errors - Validation errors
Classification code: 921.5 Optimization Techniques - 921 Mathematics - 813 Coatings
and Finishes - 731 Automatic Control Principles and Applications - 723.5 Computer
Applications - 723 Computer Software, Data Handling and Applications - 423 Non
Mechanical Properties and Tests of Building Materials
DOI: 10.4028/www.scientific.net/AMM.330.1075
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20133016531054

Title: Identity-based optimistic fair exchange in the standard model

Authors: Zhang, Lei1 ; Wu, Qianhong2, 3 ; Qin, Bo2, 4/张磊;伍前红;秦波

Author affiliation:

1 Shanghai Key Laboratory of Trustworthy Computing, Software Engineering Institute, East
China Normal University, Shanghai, China

2 UNESCO Chair in Data Privacy, Department of Computer Engineering and Mathematics,
Universitat Rovira i Virgili, Tarragona, Catalonia, Spain

3 Key Laboratory of Aerospace Information Security and Trusted Computing, Ministry of
Education, School of Computer, Wuhan University, Wuhan, China

4 Department of Maths, School of Science, Xi'an University of Technology, Xi'an, China

Corresponding author: Zhang, L. (leizhang@sei.ecnu.edu.cn)

Source title: Security and Communication Networks

Abbreviated source title: Secur. Commun. Networks

Volume: 6

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 1010-1020

Language: English

ISSN: 19390122

E-ISSN: 19390114

Document type: Journal article (JA)

Publisher: John Wiley and Sons Inc., P.O.Box 18667, Newark, NJ 07191-8667, United
States

Abstract: A fair exchange protocol allows two entities to exchange digital signatures over
open networks in a fair way, so that either each entity obtains the other's signature or neither
entity does. Fair exchange protocol plays an important role in electronic commerce in the case of
exchanging digital contracts. In this paper, we propose a fair exchange protocol based on
identity-based verifiably encrypted signatures. Our protocol involves an offline trusted third party
which is only required when one entity attempts to cheat or crashes. The underlining

identity-based verifiably encrypted signature scheme is proven secure under the computational Diffie-Hellman assumption and is the first identity-based verifiably encrypted signature scheme provably secure against existential unforgeable under adaptive chosen message and identity attacks in the standard model. Copyright © 2012 John Wiley & Sons, Ltd. We propose a fair exchange protocol based on identity-based verifiably encrypted signatures. The protocol involves an offline trusted third party which is only required when one entity attempts to cheat or crashes. The underlining identity-based verifiably encrypted signature scheme is the first identity-based verifiably encrypted signature scheme provably secure against existential unforgeable under adaptive chosen message and identity attacks in the standard model. © 2012 John Wiley & Sons, Ltd.

Number of references: 29

Main heading: Cryptography

Controlled terms: Authentication - Electronic document identification systems

Uncontrolled terms: Diffie-Hellman assumption - Fair exchange - Fair-exchange protocols - Identity based cryptography - Optimistic fair exchanges - The standard model - Trusted third parties - Verifiably encrypted signatures

Classification code: 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications

DOI: 10.1002/sec.652

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20133016526161

Title: Improving barrier properties of PET by depositing a layer of DLC films on surface

Authors: Zhang, Zhiguo¹ ; Song, Riheng² ; Li, Guoneng¹ ; Hu, Guilin¹ ; Sun, Yaoyu¹ / ; ; ; ; ;

Author affiliation:

1 School of Light Industry, Zhejiang University of Science and Technology, Liuhe Road No. 318, Hangzhou, Zhejiang 310023, China

2 Department of Packaging Engineering, Xi'an University of Technology, Xi'an, Shanxi 710048, China

Corresponding author: Zhang, Z. (107023@zust.edu.cn)

Source title: Advances in Materials Science and Engineering

Abbreviated source title: Adv. Mater. Sci. Eng.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 861804

Language: English

ISSN: 16878434

E-ISSN: 16878442

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: The diamond-like carbon films (DLC films) depositing on the Poly (ethylene

terephthalate) (PET) surface are obtained by plasma-enhanced chemical vapor deposition (PECVD), and the working gases are acetylene and argon gas. Surface morphology and the internal structure of DLC films are investigated by using Raman and FESEM, and the barrier properties of PET films which have been deposited the DLC films are tested in this paper. The results show that the deposition process parameters have an important effect on structure and performance of DLC films. It is shown that the diamond-like carbon films prepared by PECVD system are an amorphous carbon films which mixed with sp³ bond and sp² bond. The best oxygen barrier property and water vapor barrier property of PET films are increased by 11 times and 12 times, respectively, in which the I D / I G ratio of the DLC film is nearly 0.76, and the sp³ content is about 40%. © 2013 Zhiguo Zhang et al.

Number of references: 25

Main heading: Carbon films

Controlled terms: Amorphous carbon - Argon - Building materials - Plasma enhanced chemical vapor deposition - Vapors

Uncontrolled terms: Argon gas - Barrier properties - Deposition process - Internal structure - Oxygen barrier properties - Poly(ethylene terephthalate) (PET) - Structure and performance - Water vapor barriers

Classification code: 932.3 Plasma Physics - 813.2 Coating Materials - 804 Chemical Products Generally - 712 Electronic and Thermionic Materials - 415 Metals, Plastics, Wood and Other Structural Materials - 414 Masonry Materials - 413 Insulating Materials - 412 Concrete - 411 Bituminous Materials

DOI: 10.1155/2013/861804

Database: Compendex

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20120810 新增 7 条

1.

Accession number: 20133116561984

Title: The positioning fit theory and empirical research based on product value

Authors: Chen, Jing-Dong¹ ; Xue, Jiao¹/陈敬东;薛皎

Author affiliation:

1 School of Economics and Administration, Xi'an University of Technology, Xi'an, China

Source title: Proceedings - 2010 International Conference on Web Information Systems and Mining, WISM 2010

Abbreviated source title: Proc. - Int. Conf. Web Inf. Syst. Min., WISM

Volume: 2

Monograph title: Proceedings - 2010 International Conference on Web Information Systems and Mining, WISM 2010

Issue date: 2010

Publication year: 2010

Pages: 391-394

Article number: 5663080

Language: English

ISBN-13: 9780769542249

Document type: Conference article (CA)

Conference name: 2010 International Conference on Web Information Systems and Mining, WISM 2010

Conference date: October 23, 2010 - October 24, 2010

Conference location: Sanya, China

Conference code: 82744

Sponsor: Hainan Province Institute of Computer; Qiongzhou University

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Marketing theory such as STP and 4P is well known for us in the Industrial economy. Based on this theory marketing staff achieve customer benefits through upgrading satisfaction of customer in product. But with the changing of market, people's attention shifted from benefits to the values, so the limitations of satisfaction theory are appeared. In this paper, product value will be in-depth analyzed, the model of different position fit about products will be re-build, we also figure out the relationship among product benefits, fit and position. Structural Equation was used to make sure the reasonable of the model. © 2010 IEEE.

Number of references: 7

Main heading: Customer satisfaction

Controlled terms: Commerce - World Wide Web

Uncontrolled terms: Benefits - Customer benefits - Empirical

research - Fit - Positioning - Product benefits - Product value - Structural equations

Classification code: 716 Telecommunication; Radar, Radio and Television - 717 Optical

Communication - 718 Telephone Systems and Related Technologies; Line

Communications - 723 Computer Software, Data Handling and Applications - 911.2 Industrial Economics - 912 Industrial Engineering and Management

DOI: 10.1109/WISM.2010.17

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133116550636

Title: Experimental investigation on phase transformation of Cu-Ni-Si alloy melts during cooling

Authors: Jia, L.1 ; Xie, H.1, 2, 3 ; Lu, Z.L.1 ; Wang, X.1 ; Lin, X.3/贾磊;谢辉;吕振林

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Aeronautical University, Xi'an 710077, China

3 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710072, China

Corresponding author: Xie, H. (xaxiehui@hotmail.com)

Source title: Materials Science and Technology (United Kingdom)

Abbreviated source title: Mater. Sci. Technol.

Volume: 29

Issue: 8
 Issue date: August 2013
 Publication year: 2013
 Pages: 995-999
 Language: English
 ISSN: 02670836
 E-ISSN: 17432847
 CODEN: MSCTEP
 Document type: Journal article (JA)
 Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United Kingdom
 Abstract: Rapid water quenching experiments were first carried out according to differential scanning calorimetry results, and then the microstructure and phase composition of such water quenching Cu-8.33Ni-1.67Si (wt-%) samples were investigated. Subsequently, calculation on the competition nucleation of the primary phase was also carried out. Based on the experimental and calculational results, the phase transformation behaviour of Cu-8.33Ni-1.67Si melts during the cooling process was discussed, and the results can be summarised as follows. First, the α -Cu phase formed as a primary phase due to the shorter incubation time and higher time dependent nucleation rate. Subsequently, a eutectic reaction occurred in the interdendritic residual liquid phase of the primary α -Cu grains, and its product was α -Cu₂Ni₃Si. The third and fourth phase transformation could be described to the precipitation of the δ -Ni₂Si phase in the region close to the grain boundary phase and the internal of the primary α -Cu grains respectively. © 2013 Institute of Materials, Minerals and Mining.
 Number of references: 24
 Main heading: Silicon alloys
 Controlled terms: Differential scanning calorimetry - Grain boundaries - Microstructure - Nickel - Nucleation - Phase transitions - Silicon
 Uncontrolled terms: Cooling process - Cu-Ni-Si alloy - Eutectic reactions - Experimental investigations - Grain boundary phase - Incubation time - Residual liquid - Water quenching
 Classification code: 548.1 Nickel - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals - 801 Chemistry - 801.4 Physical Chemistry - 933 Solid State Physics - 951 Materials Science
 DOI: 10.1179/1743284713Y.0000000247
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 3.
 Accession number: 20133116560479
 Title: Simulation of BP-PID control for electrohydraulic proportional position servo system
 Authors: Jian-ming, Zheng¹ ; Min, Xiao¹ ; Ming-shun, Yang¹ ; Yan, Li¹ ; Ling-fei, Kong¹/郑建明;;杨明顺;李言;孔令飞
 Author affiliation:
 1 Xi'an University of Technology, Xi'an, China

Corresponding author: Jian-ming, Z. (zjm@xaut.edu.cn)

Source title: International Journal of Online Engineering

Abbreviated source title: Int. J. Online Eng.

Volume: 9

Issue: 3

Issue date: 2013

Publication year: 2013

Pages: 40-44

Language: English

ISSN: 18681646

E-ISSN: 18612121

Document type: Journal article (JA)

Publisher: Kassel University Press GmbH, Diagonale 10, Kassel, 34127, Germany

Abstract: The electro-hydraulic proportional position servo system is a kind of highly non-linear and time-varying system as well as parameter uncertainties. It is often difficult to achieve satisfactory control results with the traditional control methods. Considering that the adaptive neural network PID control method has the characteristics of online learning and adjustment PID control parameters adaptively, this paper puts forward to adopt BP-PID control method for the position servo control of electro-hydraulic proportional system. An online adaptive BP-PID controller is designed. The simulation model of the system is established based on Simulink platform. The step response and Sinusoidal tracking characteristics are researched through simulations and experiments. The results show that BP-PID has a strong ability of online learning and self-tuning PID parameters. Compared with the traditional PID control method, the BP-PID control has strong self-adaptability and robustness, and can significantly improve the step response speed and tracking control precision.

Number of references: 11

Main heading: Three term control systems

Controlled terms: Computer simulation - E-learning - Proportional control systems - Servomechanisms

Uncontrolled terms: Adaptive neural networks - Control parameters - Electro-hydraulic proportional system - Electro-hydraulics - Parameter uncertainty - Position servo systems - Satisfactory control - Tracking controls

Classification code: 705 Electric Generators and Motors - 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 731.1 Control Systems

DOI: 10.3991/ijoe.v9i3.2602

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133116566256

Title: Effect of pore forming agent on microstructures and properties of porous molybdenum

Authors: Lu, Zhenlin1 ; Rao, Xiaojie1 ; Xu, Xiaofeng2/吕振林;;

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048,

China

2 School of Materials and Engineering, Henan University of Science and Technology, Luoyang 471023, China

Source title: Materials Science Forum

Abbreviated source title: Mater. Sci. Forum

Volume: 761

Monograph title: Eco-Materials Processing and Design XIV

Issue date: 2013

Publication year: 2013

Pages: 157-160

Language: English

ISSN: 02555476

CODEN: MSFOEP

ISBN-13: 9783037857144

Document type: Conference article (CA)

Conference name: 14th International Symposium on Eco-Materials Processing and Design, ISEPD 2013

Conference date: January 15, 2013 - January 18, 2013

Conference location: Kagoshima, Japan

Conference code: 98156

Sponsor: Faculty of Engineering Kagoshima University; Basic Science Division of the Ceramic Society of Japan

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The porous molybdenum was prepared by addition of pore forming agent and powder metallurgy method. The results show that the species and amount of pore forming agent are the primary influencing factors for the microstructures and properties of porous molybdenum. The pore shapes in porous molybdenum are regular and uniformly distributed. The porosity of porous molybdenum would be the largest and the transmission rate would be the best when sodium chloride was selected as pore forming agent. The compressive fracture strength of porous molybdenum would be more than 30MPa when the ammonium hydrogen carbonate was selected as pore forming agent and its addition was 70% (volume fraction). But the porosity would be the lowest. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Molybdenum

Controlled terms: Microstructure - Porosity - Powder metallurgy

Uncontrolled terms: Ammonium hydrogen carbonate - Compressive fracture strength - Microstructures and properties - Pore shape - Pore-forming agents - Porous molybdenum - Properties - Transmission rates

Classification code: 536 Powder Metallurgy - 543.3 Molybdenum and Alloys - 931.2

Physical Properties of Gases, Liquids and Solids - 933 Solid State Physics - 951 Materials Science

DOI: 10.4028/www.scientific.net/MSF.761.157

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133116565820

Title: A Process Positioning System for Sheet-Fed Offset Press

Authors: Ma, Li E.1, 2 ; Zhang, Hai Yan1 ; Li, Wei3/马利娥;张海燕;李伟;

Author affiliation:

1 School of Printing and Packaging Engineering, Xi'an University of Technology, 710048 Xi'an, China

2 School of Mechanical Engineering, Xi'an Jiaotong University, 710072 Xi'an, China

3 Huawei Technologies Co., Ltd., Shenzhen 518129, China

Source title: Communications in Computer and Information Science

Abbreviated source title: Commun. Comput. Info. Sci.

Volume: 135

Issue: PART 2

Monograph title: Intelligent Computing and Information Science : International Conference, ICIS 2011 Chongqing, China, January 8-9, 2011 Proceedings, Part II

Issue date: 2011

Publication year: 2011

Pages: 532-537

Language: English

ISSN: 18650929

ISBN-13: 9783642181337

Document type: Conference article (CA)

Conference name: 2011 International Conference on Intelligent Computing and Information Science, ICICIS 2011

Conference date: January 8, 2011 - January 9, 2011

Conference location: Chongqing, China

Conference code: 98076

Sponsor: Control Eng. and Inf. Sci. Res. Assoc.; Internat. Front. of sci. and technol. Res. Assoc.; Chongqing Xueya Conferences Catering Co., Ltd; Chongqing University of Technology

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: Sheet positioning time is one of the main influence factors to improve the printing velocity of offset printing press. In the process positioning system, stepping motor, transducer and roller wheels replace the traditional mechanical front and side guide system. Front and side guiding is finished while the paper is moving in the feeding table. The paper position signal detected by transducer is transferred to the stepping motors which control the wheels above the paper. Then the paper moves in the longitudinal and side direction. So the front and side position of the printing paper is definite. © Springer-Verlag Berlin Heidelberg 2011.

Number of references: 9

Main heading: Stepping motors

Controlled terms: Information science - Intelligent computing - Offset printing - Printing presses - Transducers - Wheels

Uncontrolled terms: Guide system - Position signals - Positioning system - Printing papers - Sheet-fed offset press

Classification code: 745.1.1 Printing Equipment - 745.1 Printing - 723.4 Artificial Intelligence - 903 Information Science - 715 Electronic Equipment, General Purpose and Industrial - 704 Electric Components and Equipment - 601.2 Machine Components - 705.3 Electric Motors

DOI: 10.1007/978-3-642-18134-4_84

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133116556862

Title: An approach for system model identification

Authors: Xu, Xiaoping¹ ; Qian, Fucui¹ ; Wang, Feng²/徐小平;钱富才;王峰

Author affiliation:

1 School of Sciences, Xi'an University of Technology, Xi'an, China

2 State Key Laboratory for Manufacturing Systems Engineering, Systems Engineering Institute, Xi'an Jiaotong University, Xi'an, China

Source title: Lecture Notes in Electrical Engineering

Abbreviated source title: Lect. Notes Electr. Eng.

Volume: 125 LNEE

Issue: VOL. 2

Monograph title: Recent Advances in Computer Science and Information Engineering

Issue date: 2012

Publication year: 2012

Pages: 99-104

Language: English

ISSN: 18761100

E-ISSN: 18761119

Document type: Conference article (CA)

Conference name: 2009 11th IEEE International Conference on e-Health Networking, Applications and Services, Healthcom 2009

Conference date: December 16, 2009 - December 18, 2009

Conference location: Sydney, Australia

Conference code: 79478

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: A method is investigated for system model identification in this paper. The idea of the scheme employs a system model composed with classical models so as to transform the system structure identification into a combinational problem. The bacterial foraging optimization technique is then applied to implement the identification on the structure and parameters.

Finally, simulation results indicate the rationality of the proposed method. © 2012

Springer-Verlag GmbH.

Number of references: 6

Main heading: Electrical engineering

Controlled terms: Mathematical techniques

Uncontrolled terms: Bacterial foraging optimization - Classical model - Combinational problems - System model identification - System

models - System structures

Classification code: 709 Electrical Engineering, General - 921 Mathematics

DOI: 10.1007/978-3-642-25789-6_15

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133116549330

Title: A new method for loran-C ASF calculation over irregular Terrain

Authors: Zhou, Lili1 ; Xi, Xiaoli1 ; Zhang, Jinsheng2 ; Pu, Yurong1/周丽丽;席晓莉;张金生;

Author affiliation:

1 Department of Electrical Engineering, Xi'an University of Technology, 5 South Jinhua Road, Xi'an, 710048, China

2 Xi'an High-Tech Institute, Xi'an, China

Source title: IEEE Transactions on Aerospace and Electronic Systems

Abbreviated source title: IEEE Trans. Aerosp. Electron. Syst.

Volume: 49

Issue: 3

Issue date: 2013

Publication year: 2013

Pages: 1738-1744

Article number: 6558016

Language: English

ISSN: 00189251

CODEN: IEARAX

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: The finite-difference time-domain (FDTD) method is employed to improve the prediction accuracy of the Loran-C additional secondary factors (ASFs) over irregular terrains. The FDTD method is validated by comparing the results with the theoretical method with flat Earth formula, and then the ASFs are studied as functions of the mountain's slope gradient, height, and width, respectively. The cases with multiple mountains in the propagation paths are also studied. Numerical results show that when the gradient of the mountain is low, the FDTD and integral equation methods both perform well. However, when the gradient of the mountain is rather high, before the mountain area, the FDTD method predicts the ASFs oscillation caused by the reflected and scattered wave from the terrains, whereas the integral equation method is not applicable. Therefore, the FDTD method is better than the integral equation method in predicting Loran-C signals propagating over the region with serious irregularities. The measured ASFs of Loran signals are taken along two real paths between Pucheng and Qinling Mountains in Shaanxi Province, China. It is found that most of the measured and FDTD results have good agreement while some still have certain errors due to the model approximation measured. The ASFs change rapidly in the region with serious irregularities. © 1965-2011 IEEE.

Number of references: 19

Main heading: Time domain analysis

Controlled terms: Finite difference time domain method - Integral equations - Landforms - Numerical methods - Radio navigation
Uncontrolled terms: Additional secondary factors - Finite-difference time-domain (FDTD) methods - Integral equation methods - Irregular terrain - Model approximations - Prediction accuracy - Propagation paths - Theoretical methods
Classification code: 481.1 Geology - 716.3 Radio Systems and Equipment - 921 Mathematics
DOI: 10.1109/TAES.2013.6558016
Database: Compendex
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20130817 新增 4 条

1.

Accession number: 20133216578101
Title: Analysis of wireless link characteristics in RFID location-network
Authors: Li, Junhuai1 ; Zhang, Guomou1 ; Wei, Wei1 ; Wang, Zhixiao1 ; Zhang, Jing1/李军怀;;魏巍;;张璟
Author affiliation:
1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
Corresponding author: Li, J.
Source title: Information Technology Journal
Abbreviated source title: Inf. Technol. J.
Volume: 12
Issue: 11
Issue date: 2013
Publication year: 2013
Pages: 2207-2212
Language: English
ISSN: 18125638
E-ISSN: 18125646
Document type: Journal article (JA)
Publisher: Asian Network for Scientific Information, 308-Lasani Town, Sargodha Road, Faisalabad, Pakistan
Abstract: RFID-based location awareness is becoming the most important issue in many fields in recent years, such as ubiquitous computing, mobile computing. However, the RF system is noise-limited, which leads to the readers can't read the information from tags timely and accurately, especially for RFID localization network. This study proposed a novel RFID indoor localization method based on Received Signal Strength Indicator (RSSI) and Packet Received Ratio (PRR). To do so, the environmental factors affecting the link quality are analyzed and the location awareness data is collected by RFID equipment using non-coherent Frequency Shift Keying (FSK) as modulation scheme and Not Return to Zero (NRZ) as encoding scheme. Then the relationship model between RSSI, PRR and distance is established based on the classic radio propagation

model in localization field and theoretical analysis of the normal probability distribution of PRR is conducted. The experimental results show that our approach is valid and proper and also contributes to a novel perspective and theoretical support on the further study and application of RFID indoor localization. © 2013 Asian Network for Scientific Information.

Number of references: 26

Main heading: Frequency shift keying

Controlled terms: Probability distributions - Radio frequency identification (RFID) - Radio waves - Ubiquitous computing

Uncontrolled terms: Frequency shift keying(FSK) - Link characteristics - Normal probability distributions - PRR - Radio propagation models - Received signal strength indicators - RSSI - Study and applications

Classification code: 922.1 Probability Theory - 723.5 Computer Applications - 718 Telephone Systems and Related Technologies; Line Communications - 717 Optical Communication - 716.3 Radio Systems and Equipment - 716 Telecommunication; Radar, Radio and Television - 711 Electromagnetic Waves

DOI: 10.3923/itj.2013.2207.2212

Database: Compendex

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2.

Accession number: 20133216582315

Title: Enhanced electrical properties of lead-free Bi₄-xSb xTi₃O₁₂ ceramics with high T_c

Authors: Wang, J.J.1 ; Feng, L.J.1 ; Chao, X.L.2 ; Zhao, K.1 ; Yan, A.J.3/王娟娟;冯拉俊;;赵康

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Materials Science and Engineering, Shaanxi Normal University, Xi'an 710062, China

3 Shaanxi Electric Power Research Institute, Xi'an 710054, China

Corresponding author: Wang, J.J. (juanwang@xaut.edu.cn)

Source title: Current Applied Physics

Abbreviated source title: Curr. Appl. Phys.

Volume: 13

Issue: 8

Issue date: 2013

Publication year: 2013

Pages: 1713-1717

Language: English

ISSN: 15671739

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Bi₄-xSb_xTi₃O₁₂ (BST) ceramics were prepared and studied in this work in terms of Sb³⁺-modified microstructure and phase development as well as electrical response. By increasing Sb content, the phase structure of the ceramics changed from orthorhombic (Bi₄Ti₃O₁₂-like) to pyrochlore (Bi₂Ti₂O₇-like) phase. Raman spectroscopy showed that the intensities of the lattice vibration modes at frequencies decrease, whereas all bands and

bandwidths in all frequency numbers also demonstrate changes. According to the results processed from SEM, Sb 3+ into the Bi₄Ti₃O₁₂ (BIT) matrix had the effect of increasing the material grain size. Er, Em, Pr, d₃₃ and T_c of Bi_{3.90}Sb_{0.10}Ti₃O₁₂ ceramics are found to be 307, 3492, 8.09 μC cm⁻², 18 pC/N and 660 C, respectively. And Bi_{4-x}Sb_xTi₃O₁₂ ceramics have good temperature stability, which is very suitable for the practical high-temperature applications. © 2013 Elsevier B.V. All rights reserved.

Number of references: 13

Main heading: Electric properties

Controlled terms: Ceramic materials - Raman spectroscopy

Uncontrolled terms: Electrical response - Grain

size - High-T - Lead-Free - Phase development - Pyrochlores - Temperature stability - X ray methods

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 741.1

Light/Optics - 812.1 Ceramics

DOI: 10.1016/j.cap.2013.06.029

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133216581253

Title: Structural and photoelectrical characteristics of Si/6H-SiC heterojunctions prepared by hot-wall chemical vapor deposition

Authors: Yang, Chen^{1, 2}; Chen, Zhiming³; Liu, Weiguo¹; Zeng, Xierong²/杨陈;陈治明;刘卫国;;

Author affiliation:

1 Shaanxi Province Thin Film Technology and Optical Test Open Key Laboratory, Xi'an Technological University, Xi'an 710048, China

2 Shenzhen Key Laboratory of Special Functional Materials, Shenzhen University, Shenzhen 518060, China

3 Department of Electronic Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Yang, C. (yangchen931@hotmail.com)

Source title: Materials Science in Semiconductor Processing

Abbreviated source title: Mater Sci Semicond Process

Volume: 16

Issue: 6

Issue date: 2013

Publication year: 2013

Pages: 1765-1768

Language: English

ISSN: 13698001

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: Based on a potential application for the Si/SiC heterojunction to realize light control of SiC devices, structures and electrical properties of boron-doped silicon layer deposited on the n-type 6H-SiC substrate by hot-wall chemical vapor deposition were investigated in this

paper. X-ray diffraction analysis and scanning electronic microscopy were used to characterize the crystal structure and morphology of the deposited silicon layer. Results of I-V and C-V measurements indicated that the heterojunction was abrupt manifesting obvious p-n junction properties. During the I-V measurement, the Si/SiC heterojunction developed a remarkable photovoltaic effect under illumination condition. © 2013 Published by Elsevier Ltd.

Number of references: 11

Main heading: Heterojunctions

Controlled terms: Chemical vapor deposition - Electric properties - Silicon - Silicon carbide - Vapors

Uncontrolled terms: Boron-doped silicon - C-V measurement - Crystal structure and morphology - Diffraction analysis - I-V measurements - Illumination conditions - Scanning electronic microscopy - Si/6h-sic heterojunctions

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 712.1.1 Single Element Semiconducting Materials - 714.2 Semiconductor Devices and Integrated Circuits - 802.2 Chemical Reactions - 804 Chemical Products Generally - 804.2 Inorganic Compounds

DOI: 10.1016/j.mssp.2013.03.008

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133216592760

Title: A generic construction of proxy signatures from certificateless signatures

Authors: Zhang, Lei¹ ; Wu, Qianhong^{2, 3} ; Qin, Bo^{2, 4} ; Domingo-Ferrer, Josep² ; Zeng, Peng¹ ; Liu, Jianwei⁵ ; Du, Ruiying³; 伍前红;秦波;

Author affiliation:

1 Shanghai Key Laboratory of Trustworthy Computing, Software Engineering Institute, East China Normal University, Shanghai, China

2 Department of Computer Engineering and Mathematics, Universitat Rovira i Virgili, Tarragona, Catalonia, Spain

3 Key Lab. of Aerospace Information Security and Trusted Computing Ministry of Education, Wuhan University, School of Computer, China

4 Department of Maths, School of Science, Xi'an University of Technology, China

5 School of Electronic and Information Engineering, Beijing University of Aeronautics and Astronautics, China

Source title: Proceedings - International Conference on Advanced Information Networking and Applications, AINA

Abbreviated source title: Proc. Int. Conf. Adv. Inf. Netw. Appl. AINA

Monograph title: Proceedings - IEEE International Conference on Advanced Information Networking and Applications, AINA 2013

Issue date: 2013

Publication year: 2013

Pages: 259-266

Article number: 6531764

Language: English

ISSN: 1550445X
ISBN-13: 9780769549538
Document type: Conference article (CA)
Conference name: 27th IEEE International Conference on Advanced Information Networking and Applications, AINA 2013
Conference date: March 25, 2013 - March 28, 2013
Conference location: Barcelona, Spain
Conference code: 98059
Sponsor: IEEE Technical Committee on Distributed Processing (TCDP); Technical University of Catalonia; Fukuoka Institute of Technology
Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States
Abstract: The primitive of proxy signatures allows the original signer to delegate proxy signers to sign on messages on behalf of the original signer. It has found numerous applications in distributed computing scenarios where delegation of signing rights is common. Certificateless public key cryptography eliminates the complicated certificates in traditional public key cryptosystems without suffering from the key escrow problem in identity-based public key cryptography. In this paper, we reveal the relationship between the two important primitives of proxy signatures and certificateless signatures and present a generic conversion from the latter to the former. Following the generic transformation, we propose an efficient proxy signature scheme with a recent certificateless signature scheme. © 2013 IEEE.
Number of references: 19
Main heading: Network security
Controlled terms: Authentication - Public key cryptography
Uncontrolled terms: Certificateless public key cryptography - Certificateless signature - Certificateless signature schemes - Generic transformations - Provable security - Proxy signature scheme - Proxy signatures - Public key cryptosystems
Classification code: 723 Computer Software, Data Handling and Applications
DOI: 10.1109/AINA.2013.54
Database: Compendex
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20130824 新增 9 条

1.

Accession number: 20133316621764

Title: Effect of land use on scouring flow hydraulics and transport of soil solute in erosion

Authors: Guo, Tailong^{1, 2} ; Wang, Qianjiu³ ; Bai, Wenjuan⁴ ; Zhuang, Jie⁵/郭太龙;王全九;;

Author affiliation:

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2 State Key Laboratory of Soil Erosion and Dryland Farming on the Loess Plateau, Institute of

Soil and Water Conservation, Chinese Academy of Sciences, No. 26 Xinong Rd., Yangling, Shaanxi 712100, China

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Corresponding author: Wang, Q. (wquanjiu@163.com)

Source title: Journal of Hydrologic Engineering

Abbreviated source title: J. Hydrol. Eng.

Volume: 18

Issue: 4

Issue date: 2013

Publication year: 2013

Pages: 465-473

Language: English

ISSN: 10840699

Document type: Journal article (JA)

Publisher: American Society of Civil Engineers (ASCE), 1801 Alexander Graham Bell Drive, Reston, VA 20191-4400, United States

Abstract: Water flushing was applied to different land use plots on Loess slopes to examine the effect of land use changes on flow hydraulics and the transport of soil surface solutes in erosion. The runoff and movement of sediment and soil solutes were analyzed in relation to land use and scouring flow. Flow experiments were conducted with five land use treatments: abandoned land (*Salsola ruthenica*), alfalfa land (*Medicago sativa*), corn land, scrub land (*Caragana intermedia*), and bare land. The results show that at the same scouring time, the cumulative sediment yields with different land use types are: bare land > corn land > *Caragana intermedia* land > abandoned land > alfalfa land. The unit sediment loads are similar to this modulus of the cumulative sediment yields. The pre-experimental water contents of the soil profile exerted a greater effect on the content of soil moisture and its distribution on the slope than that of the antecedent solute contents in the field experiment conditions for different land use types. The land use types also affected the surface transport of soil solute. The bromide concentrations in runoff were in the order of: bare land > corn land > alfalfa land > *Caragana intermedia* land > abandoned land. The nitrate concentrations in runoff with different land use types had no obvious orderliness. However, the nitrate concentration was lineally related to the bromide concentration, as expressed by $CNO-3 = 3.01CBr + 28.35$ ($R^2 = 0.90$). © 2013 American Society of Civil Engineers.

Number of references: 48

Main heading: Runoff

Controlled terms: Erosion - Hydraulics - Land use - Sediments - Soil moisture - Solute transport

Uncontrolled terms: Different land use types - Field experiment - Flow experiments - Flow hydraulics - Loess - Nitrate concentration - Soil erosion - Surface

transport

Classification code: 403 Urban and Regional Planning and Development - 444.1 Surface Water - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 632.1 Hydraulics

DOI: 10.1061/(ASCE)HE.1943-5584.0000611

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133316605967

Title: Seismic performance of steel-reinforced recycled concrete columns under low cyclic loads

Authors: Ma, Hui¹ ; Xue, Jianyang² ; Zhang, Xicheng² ; Luo, Daming²;;;

Author affiliation:

1 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an, Shaanxi, China

2 School of Civil Engineering, Xi'an University of Architecture and Technology, Xi'an, Shaanxi, China

Corresponding author: Ma, H. (mahuiwell@163.com)

Source title: Construction and Building Materials

Abbreviated source title: Constr Build Mater

Volume: 48

Issue date: 2013

Publication year: 2013

Pages: 229-237

Language: English

ISSN: 09500618

CODEN: CBUMEZ

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: This paper describes an experimental study of the seismic performance of steel-reinforced recycled concrete (SRRC) columns. Based on low cyclic loading tests of seven 1:2.5-scaled column specimens, the failure modes, hysteresis loops, skeleton curves, ductility, energy dissipation capacity, and stiffness degradation of SRRC columns were analyzed. The influence of recycled coarse aggregate (RCA) replacement percentages, axial compression ratios, and stirrup ratios on the seismic performance of SRRC columns was investigated in detail. The test results show that the seismic performance of SRRC columns decreases slightly as the RCA replacement percentage increases. The results also indicate that appropriate design of the axial compression ratio and stirrup ratio can improve the seismic performance of SRRC columns. The average values of the ductility factor and the equivalent viscous damping coefficient with respect to the loop of ultimate load of the columns were 3.47 and 0.217, respectively, which reflect the SRRC columns' good performance in terms of earthquake resistance. © 2013 Elsevier Ltd. All rights reserved.

Number of references: 20

Main heading: Seismic waves

Controlled terms: Aggregates - Axial compression - Columns
(structural) - Compression ratio (machinery) - Concretes - Cyclic
loads - Ductility - Earthquake resistance - Recycling - Reinforcement
Uncontrolled terms: Energy dissipation capacities - Equivalent viscous damping
coefficient - Low cyclic loading tests - Recycled coarse aggregate - Recycled concrete
columns - Seismic Performance - Steel reinforced concrete - Stiffness degradation
Classification code: 618.1 Compressors - 484 Seismology - 483 Soil Mechanics and
Foundations - 452.3 Industrial Wastes - 951 Materials Science - 421 Strength of Building
Materials; Mechanical Properties - 412 Concrete - 408 Structural Design - 406 Highway
Engineering - 415 Metals, Plastics, Wood and Other Structural Materials
DOI: 10.1016/j.conbuildmat.2013.06.019
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133316600457
Title: An impact of self-recirculation casing treatment (SRCT) configurations on impeller
stall margin and the flow field
Authors: Ma, Yan1 ; Xi, Guang1 ; Wu, Guangkuan2/;;吴广宽
Author affiliation:
1 School of Energy and Power Engineering, Xi'an Jiaotong University, Xi'an 710049, China
2 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology,
Xi'an 710048, China
Source title: Proceedings of the ASME Turbo Expo
Abbreviated source title: Proc. ASME Turbo Expo
Volume: 5
Monograph title: ASME Turbo Expo 2012: Turbine Technical Conference and Exposition,
GT 2012
Volume title: Manufacturing Materials and Metallurgy; Marine; Microturbines and Small
Turbomachinery; Supercritical CO2 Power Cycles
Issue date: 2012
Publication year: 2012
Pages: 551-559
Language: English
ISBN-13: 9780791844717
Document type: Conference article (CA)
Conference name: ASME Turbo Expo 2012: Turbine Technical Conference and Exposition,
GT 2012
Conference date: June 11, 2012 - June 15, 2012
Conference location: Copenhagen, Denmark
Conference code: 97714
Publisher: American Society of Mechanical Engineers, 3 Park Avenue, New York, NY
10016-5990, United States
Abstract: The present paper describes an investigation of stall margin enhancement and a
detailed analysis of the impeller flow field due to self-recirculation casing treatment (SRCT)

configuration of a high-speed small-size centrifugal impeller. The influence of different SRCT configurations on the impeller flow field at near-stall condition has been analyzed, highlighting the improvement in stall flow ability. This paper also discusses the influence of the SRCT configurations on the inlet flow angle, inlet swirl velocity and loss distribution in the impeller passage to understand the mechanism of the SRCT configurations in enhancing the stall margin of the impeller. The variation of the bleed flow rate at different operating conditions is also presented in this paper. Finally, the time-averaged unsteady simulation results at near-stall point are presented and compared with steady-state solutions. Copyright © 2012 by ASME.

Number of references: 16

Main heading: Impellers

Controlled terms: Exhibitions - Flow fields - Gas turbines

Uncontrolled terms: Casing treatment - Centrifugal impeller - Different operating conditions - Impeller passage - Loss distribution - Steady state solution - Time-averaged - Unsteady simulations

Classification code: 601.2 Machine Components - 612.3 Gas Turbines and Engines - 631.1 Fluid Flow, General - 902.2 Codes and Standards

DOI: 10.1115/GT2012-68335

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133316616538

Title: Numerical simulation of mechanical properties in nanoporous membrane

Authors: Pan, Suxin1 ; Hu, Yifeng2 ; Li, Qun1/;胡义锋;

Author affiliation:

1 State Key Laboratory for Strength and Vibration of Mechanical Structures, School of Aerospace, Xi'an Jiaotong University, Xi'an 710049, China

2 School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Li, Q. (qunli@mail.xjtu.edu.cn)

Source title: Computational Materials Science

Abbreviated source title: Comput Mater Sci

Volume: 79

Issue date: 2013

Publication year: 2013

Pages: 611-618

Language: English

ISSN: 09270256

CODEN: CMMSEM

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: The objective of this work is to understand the surface/interface effect and the size/configuration dependence on the mechanical properties in nanoporous membrane. The stress concentration, nanopores coalescence, effective elastic moduli, damage level, and contraction or expansion areas are numerically investigated in membrane where three

representative arrays of nanoporous are taken into account, i.e., parallel, internal, and scatter arrays of multiple nanopores. It is concluded that the surface/interface effect and the size/configuration dependence have a significant influence on the mechanical behaviors. The coalescence path of nanopores may appear along the uni-axial tensile loading direction if the size of nanopores is less than 2 nm due to the surface/interface effect on the nanopores. Variable arrays of nanopores distributed in membrane can result in the different magnitude of effective elastic moduli. The damage level analysis represented by the M-integral in views of the energy concept reveals that the parallel arrays of nanopores yields the smallest energy release rate due to the self-similar expansion of nanopores. In particular, the nanopores may be contracted even that the remote tensile loading is applied. These studies present some reasonable explanation of the mechanical behaviors in nanoporous membrane where the mutual or simultaneous influence induced by both the surface/interface effect and the size/configuration dependence. © 2013 Elsevier B.V. All rights reserved.

Number of references: 21

Main heading: Nanopores

Controlled terms: Coalescence - Elastic moduli - Expansion - Mechanical engineering - Membranes - Stress concentration - Tensile stress

Uncontrolled terms: Damage level - Effective elastic modulus - Expansion area - Mechanical behavior - Nanoporous membrane - Parallel arrays - Smallest energies - Surface/interface effects

Classification code: 951 Materials Science - 933 Solid State Physics - 801.3 Colloid Chemistry - 761 Nanotechnology - 608 Mechanical Engineering, General - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1016/j.commatsci.2013.06.042

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133316602576

Title: Model based specification validation for automatic train protection and block system

Authors: Xie, Guo¹ ; Hei, Xinhong¹ ; Mochizuki, Hiroshi² ; Takahashi, Sei² ; Nakamura, Hideo²/谢国;黑新宏

Author affiliation:

1 Xi'An University of Technology, Shaanxi 710048, China

2 Dept. of Electronics and Computer Science, College of Science and Technology, Nihon University, Funabashi, Chiba 274-8501, Japan

Source title: Proceedings - 2012 7th International Conference on Computing and Convergence Technology (ICCIT, ICEI and ICACT), ICCCT 2012

Abbreviated source title: Proc. - Int. Conf. Comput. Convergence Technol. (ICCIT, ICEI ICACT), ICCCT

Monograph title: Proceedings - 2012 7th International Conference on Computing and Convergence Technology (ICCIT, ICEI and ICACT), ICCCT 2012

Issue date: 2012

Publication year: 2012
 Pages: 485-488
 Article number: 6530383
 Language: English
 ISBN-13: 9788994364216
 Document type: Conference article (CA)
 Conference name: 2012 7th International Conference on Computing and Convergence Technology (ICCIT, ICEI and ICACT), ICCCT 2012
 Conference date: December 3, 2012 - December 5, 2012
 Conference location: Seoul, Korea, Republic of
 Conference code: 98252
 Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
 Abstract: A novel train radio system, namely automatic train protection and block (ATPB), is proposed to reconstruct and improve the efficiency of the conventional rail lines. In development of the software system of the ATPB, the formal method is intended to be used to formally analyze its functional requirements specification (FRS) to guarantee the safety and reliability. Firstly, the FRS is written informally in natural language (i.e. Japanese). In order to ensure the correspondence between the natural language specification and the formal specification, a new strategy is proposed, including establishing the dynamic state translations (DSTs), UML diagrams and formal VDM++ model, and verifying the internal consistence of specification. In this paper, only the DSTs are discussed. They expressed the train operation process and the state changes of components, and help to determine the parameters. © 2012 AICIT.
 Number of references: 12
 Main heading: Specifications
 Controlled terms: Formal methods - Railroad signal systems - Railroad transportation
 Uncontrolled terms: ATPB - Automatic train
 protections - correspondence - Formal Specification - Functional
 requirement - Model-based specifications - Natural language specifications - Railway
 signaling systems
 Classification code: 433.1 Railroad Transportation, General - 681.3 Railroad Signals and Signaling - 723.1 Computer Programming - 902.2 Codes and Standards
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 6.
 Accession number: 20133316603658
 Title: Policy analysis for administrative role based access control without separate administration
 Authors: Yang, Ping¹ ; Gofman, Mikhail² ; Yang, Zijiang^{3, 4/;;;}
 Author affiliation:
 1 Dept. of Computer Science, State University of New York, Binghamton, NY, United States
 2 Dept. of Computer Science, California State University, Fullerton, CA, United States
 3 School of Computer Science and Engineering, Xi'an University of Technology, China
 4 Dept. of Computer Science, Western Michigan University, MI, United States

Source title: Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)

Abbreviated source title: Lect. Notes Comput. Sci.

Volume: 7964 LNCS

Monograph title: Data and Applications Security and Privacy XXVII - 27th Annual IFIP WG 11.3 Conference, DBSec 2013, Proceedings

Issue date: 2013

Publication year: 2013

Pages: 49-64

Language: English

ISSN: 03029743

E-ISSN: 16113349

ISBN-13: 9783642392559

Document type: Conference article (CA)

Conference name: 27th Annual IFIP WG 11.3 Conference on Data and Applications Security and Privacy, DBSec 2013

Conference date: July 15, 2013 - July 17, 2013

Conference location: Newark, NJ, United states

Conference code: 98271

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: Access control is widely used in large systems for restricting resource access to authorized users. In particular, role based access control (RBAC) is a generalized approach to access control and is well recognized for its many advantages in managing authorization policies. This paper considers user-role reachability analysis of administrative role based access control (ARBAC), which defines administrative roles and specifies how members of each administrative role can change the RBAC policy. Most existing works on user-role reachability analysis assume the separate administration restriction in ARBAC policies. While this restriction greatly simplifies the user-role reachability analysis, it also limits the expressiveness and applicability of ARBAC. In this paper, we consider analysis of ARBAC without the separate administration restriction and present new techniques to reduce the number of ARBAC rules and users considered during analysis. We also present a number of parallel algorithms that speed up the analysis on multi-core systems. The experimental results show that our techniques significantly reduce the analysis time, making it practical to analyze ARBAC without separate administration. © 2013 IFIP International Federation for Information Processing.

Number of references: 23

Main heading: Access control

Controlled terms: Multimedia services - Separation

Uncontrolled terms: Analysis time - Authorization policy - Authorized users - Multi-core systems - Policy analysis - Reachability analysis - Resource access - Role-based Access Control

Classification code: 723 Computer Software, Data Handling and Applications - 802.3 Chemical Operations

DOI: 10.1007/978-3-642-39256-6_4

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133216598582

Title: R&D of 4 DOF dual-arm cooperative robot - Cooperation of location (position and orientation) and motion

Authors: Yumei, Huang¹ ; Feng, Gao¹ ; Zhongbo, Peng¹ ; Yan, Li¹ ; Bamba, Eiichi² ; Yamamoto, Masahiko² ; Kume, Yasufumi²/黄玉美;高峰;;李言;

Author affiliation:

1 Xi'an University of Technology, Xi'an, China

2 Kinki University, Kowakae 3-4-1, Higashi-Osaka 577, Japan

Source title: Proceedings - IEEE International Workshop on Robot and Human Interactive Communication

Abbreviated source title: Proc. IEEE Int. Workshop Robot Human Interact. Commun.

Monograph title: Proceedings - 9th IEEE International Workshop on Robot and Human Interactive Communication, IEEE RO-MAN 2000

Issue date: 2000

Publication year: 2000

Pages: 417-420

Article number: 892640

Language: English

ISBN-10: 078036273X

ISBN-13: 9780780362734

Document type: Conference article (CA)

Conference name: 9th IEEE International Workshop on Robot and Human Interactive Communication, IEEE RO-MAN 2000

Conference date: September 27, 2000 - September 29, 2000

Conference location: Osaka, Japan

Conference code: 98317

Sponsor: IEEE Industrial Electronics Society; The Robotics Society of Japan; The Society of Instrument and Control Engineers; The Japan Society of Mechanical Engineers; The Virtual Reality Society of Japan; New Technology Foundation

Publisher: Institute of Electrical and Electronics Engineers Inc., 3 Park Avenue, 17th Floor, New York, NY 10016-5997, United States

Abstract: This paper proposes a type of dualarm robot taking Iniking spindle, nut and cutter shank of machine tool as an example. The task is achieved by making most use of the motion function of the operating objects and cooperative motion between the two arms of the robot and the operating object. It can be divided into 4 DOF, 3 DOF or 2 DOF robot based on the different motion functions of the operating objects. © 2000 IEEE.

Number of references: 3

Main heading: Robots

Controlled terms: Communication

Uncontrolled terms: Cooperative robots - Dual arm - Dual-arm robot - Motion function - Position and orientations

Classification code: 716 Telecommunication; Radar, Radio and Television - 731.5 Robotics

DOI: 10.1109/ROMAN.2000.892640

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133216598584

Title: R&D of living assistant serial & parallel robot - Analysis of motion and function

Authors: Yumei, Huang¹ ; Feng, Gao¹ ; Zemin, Fan¹ ; Shujie, Xu¹ ; Bamba, Eiichi² ; Kume, Yasufumi² ; Yamamoto, Masahiko²/黄玉美;高峰;;;

Author affiliation:

1 Xi'an University of Technology, Xi'an, China

2 Kinki University, Kowakae 3-4-1, Higashi-Osaka 577, Japan

Source title: Proceedings - IEEE International Workshop on Robot and Human Interactive Communication

Abbreviated source title: Proc. IEEE Int. Workshop Robot Human Interact. Commun.

Monograph title: Proceedings - 9th IEEE International Workshop on Robot and Human Interactive Communication, IEEE RO-MAN 2000

Issue date: 2000

Publication year: 2000

Pages: 427-429

Article number: 892642

Language: English

ISBN-10: 078036273X

ISBN-13: 9780780362734

Document type: Conference article (CA)

Conference name: 9th IEEE International Workshop on Robot and Human Interactive Communication, IEEE RO-MAN 2000

Conference date: September 27, 2000 - September 29, 2000

Conference location: Osaka, Japan

Conference code: 98317

Sponsor: IEEE Industrial Electronics Society; The Robotics Society of Japan; The Society of Instrument and Control Engineers; The Japan Society of Mechanical Engineers; The Virtual Reality Society of Japan; New Technology Foundation

Publisher: Institute of Electrical and Electronics Engineers Inc., 3 Park Avenue, 17th Floor, New York, NY 10016-5997, United States

Abstract: This paper proposes a new model of 4 DOF mixed serial¶llel robot for living assistance, which combines stable structure and high rigidity of the parallel mechanism and wide workspace of the serial mechanism organically. The rotary DOF with 3 rotary axe intersecting one point attributes the end effector chageable location, one of which reaches 360°. One linear DOF can adjust the height of the end effector. The model can be applied to nurse and recuperate with other mating device or be made into medical operating platform. © 2000 IEEE.

Number of references: 2

Main heading: Communication

Controlled terms: End effectors - Mechanisms

Uncontrolled terms: Operating platforms - Parallel mechanisms - Parallel

robots - Serial mechanism - Stable structures

Classification code: 601.3 Mechanisms - 716 Telecommunication; Radar, Radio and Television - 731.5 Robotics

DOI: 10.1109/ROMAN.2000.892642

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20133316607282

Title: Bioinspired uniform illumination by vibrated sessile droplet pinned by a hydrophilic/superhydrophobic heterogeneous surface

Authors: Zhu, Shuya1 ; Jiang, Weitao1 ; Liu, Hongzhong1 ; Yin, Lei1 ; Shi, Yongsheng1 ; Chen, Bangdao1 ; Ding, Yucheng1 ; An, Ningli2/;;;;;;;;;

Author affiliation:

1 State Key Laboratory for Manufacturing Systems Engineering, Xi'an Jiaotong University, Xi'an 710049, China

2 Department of Packaging Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liu, H. (hzliu@mail.xjtu.edu.cn)

Source title: Optics Letters

Abbreviated source title: Opt. Lett.

Volume: 38

Issue: 15

Issue date: August 1, 2013

Publication year: 2013

Pages: 2720-2722

Language: English

ISSN: 01469592

E-ISSN: 15394794

CODEN: OPLEDP

Document type: Journal article (JA)

Publisher: Optical Society of America, 2010 Massachusetts Avenue NW, Washington, DC 20036-1023, United States

Abstract: We introduce a strategy to generate uniform illumination. The droplet pinned by a hydrophilic/superhydrophobic heterogeneous surface is oscillated, driven by a laterally placed loudspeaker. The vibrated droplet can be considered as a tunable lens, whose focus and focus length can be real-time tuned. The tunable "lens" is presented as a device for uniform illumination by mechanical manipulation. The incident light is scattered by the vibrated droplet during oscillation, and the irradiance distribution on the image plane becomes larger and more homogenous when the droplet is at resonance. © 2013 Optical Society of America.

Number of references: 13

Main heading: Drops

Controlled terms: Incident solar radiation - Inertial confinement fusion

Uncontrolled terms: At resonance - Heterogeneous surface - Incident light - Irradiance distribution - Mechanical manipulation - Sessile droplet - Tunable lens - Uniform illumination

Classification code: 443.1 Atmospheric Properties - 621.2 Fusion Reactors - 657.1 Solar Energy and Phenomena

DOI: 10.1364/OL.38.002720

Database: Compendex

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20130831 新增 15 条

1.

Accession number: 20133416639039

Title: Characterization of polypropylene-polyethylene blends made of waste materials with compatibilizer and nano-filler

Authors: Fang, Changling1 ; Nie, Long1 ; Liu, Shaolong1 ; Yu, Ruien1 ; An, Ningli1 ; Li, Shasha1/方长青;聂龙;刘少龙;于瑞恩;安宁丽;理莎莎

Author affiliation: 1 College of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

Corresponding author: Fang, C. (fcqxaut@163.com)

Source title: Composites Part B: Engineering

Abbreviated source title: Compos Part B: Eng

Volume: 55

Issue date: 2013

Publication year: 2013

Pages: 498-505

Language: English

ISSN: 13598368

CODEN: CPBEFF

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: Waste polypropylene and polyethylene were blended by a twin-screw extruder with two compatibilizers (PE-g-MAH and EPDM) and an additive (O-MMT). The mechanical properties were measured firstly. By adding O-MMT, the tensile strength showed a decline while the impact strength made a promotion. The phase morphology was observed by scanning electron microscopy (SEM) to explore the fracture toughness of blends. The blend with EPDM had a better compatibilization than PE-g-MAH. X-ray diffraction was used to investigate the crystallization behavior and the result showed no change by blending. Moreover, further measurements such as thermogravimetric (TGA) and differential scanning calorimetry (DSC) were taken to show the thermal stability and crystallization temperature of the blend. Additionally, the storage modulus and loss modulus are measured by dynamic mechanical analysis (DMA), the presence of O-MMT caused the increases of the storage modulus and loss modulus. © 2013 Published by Elsevier Ltd. All rights reserved.

Number of references: 22

Main heading: Polyethylenes

Controlled terms: Blending - Compatibilizers - Crystallization - Differential scanning

calorimetry - Elastic moduli - Fracture toughness - Polypropylenes - Scanning electron microscopy - Tensile strength - X ray diffraction
Uncontrolled terms: Crystallization behavior - Crystallization temperature - Dynamic mechanical analysis (DMA) - Loss moduli - Phase morphology - Thermo-gravimetric - Twin screw extruders - Waste polypropylene
Classification code: 931.3 Atomic and Molecular Physics - 815.1.1 Organic Polymers - 815 Polymers and Polymer Science - 803 Chemical Agents and Basic Industrial Chemicals - 951 Materials Science - 802.3 Chemical Operations - 741.1 Light/Optics - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 801 Chemistry
DOI: 10.1016/j.compositesb.2013.06.046
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133316623799

Title: Force analysis of control volume in adaptive drip irrigation emitter

Authors: Feng, Junjie^{1, 2}; Fei, Liangjun¹; Zhai, Guoliang²; Deng, Zhong²; Jia, Yanhui²; Sun, Hao² 冯俊杰;费良军;翟国亮;邓忠;贾艳辉;

Author affiliation: 1 Institute of Water Resources and Hydro-Electric Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Key Laboratory of Water-Saving Agriculture of Henan Province, Farmland Irrigation Research Institute, Chinese Academy of Agricultural Sciences, Xinxiang 453003, China

Corresponding author: Feng, J. (fjldg@sina.com)

Source title: Nongye Jixie Xuebao/Transactions of the Chinese Society for Agricultural Machinery

Abbreviated source title: Nongye Jixie Xuebao

Volume: 44

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 133-138

Language: Chinese

ISSN: 10001298

CODEN: NUYYCA3

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Machinery, No. 1 Beishatan Deshengmen Wai, Beijing, 100083, China

Abstract: For theoretical analysis effect of self-adjustment flow on the adaptive drip irrigation emitter, the original size and pre-deformation deflection after fixed of the elastic adjustment diaphragm on the control volume were designed, and the total force to the elastic adjustment diaphragm based on description of its structure and working mechanism were analyzed. The theory and calculation method of mechanics to calculate the stress, the stiffness, the effective area of diaphragm and the sealing pressure ratio at interface of rubber adjustment diaphragm and energy dissipation hole were used. Then the actual sealing pressure ratio of the together

control force was obtained. Results indicated that the minimum of actual sealing pressure ratio was 0.61 MPa at the combined action of the force produced from the pre-deflection and soil negative pressure of 20 kPa, but the computational theoretical sealing pressure ratio was 0.61 MPa too. The former was equal to the latter in both of them and met the condition of the actual sealing pressure ratio which was equal to or greater than the theoretical sealing pressure ratio. So the minimum of actual sealing pressure ratio was enough to maintain the drip emitter at the mode of initial shutoff water, and in a critical state of shutoff water and supply water. As long as soil negative pressure was bigger slightly when soil was drought little by little and it was equal to 21 kPa only or more than it, the actual sealing pressure ratio reduced to 0.54 MPa and far less than the theoretical sealing pressure ratio. Then the adaptive drip irrigation emitter began to drip water, and entered the mode of automatic regulation. So it had realized the effective of self-adjustment drip flow really at the same time.

Number of references: 24

Main heading: Diaphragms

Controlled terms: Critical current density (superconductivity) - Energy dissipation - Irrigation - Soils - Stresses

Uncontrolled terms: Adaptive - Automatic regulation - Combined actions - Control volumes - Drip emitter - Force analysis - Negative pressures - Working mechanisms

Classification code: 421 Strength of Building Materials; Mechanical Properties - 483.1 Soils and Soil Mechanics - 525.4 Energy Losses (industrial and residential) - 601.2 Machine Components - 701.1 Electricity: Basic Concepts and Phenomena - 821.3 Agricultural Methods

DOI: 10.6041/j.issn.1000-1298.2013.08.023

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133416650891

Title: Novel pre-travel calibration method of touch trigger probe based on error separation

Authors: Gao, Feng^{1, 2}; Zhao, Bohan¹; Li, Yan¹; Yang, Xingang¹; Chen, Chun²/高峰;;李艳;杨新刚;;

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Mechanical Engineering, Shaanxi University of Technology, Hanzhong 723003, China

Corresponding author: Gao, F. (gf2713@xaut.edu.cn)

Source title: Yi Qi Yi Biao Xue Bao/Chinese Journal of Scientific Instrument

Abbreviated source title: Yi Qi Yi Biao Xue Bao

Volume: 34

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1581-1587

Language: Chinese

ISSN: 02543087

CODEN: YYXUDY

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: Touch trigger probe is one of the important components in On-Machine Measurement (OMM) system, whose pre-travel value would be reckoned in the measured results and has an influence on the inspection accuracy, so the pre-travel calibration must be carried out to compensate the measured value under the actual conditions accurately. Based on the analysis of the pre-travel generation causes, a novel pre-travel calibration method of touch trigger probe is proposed, in which the contact status between probe and workpiece is detected, and the displacement variation of the probe relative to the workpiece within the period between the contact time and the probe triggering time is measured, so that the pre-travel value is calibrated. The effects of various factors, such as the servo system error, geometric error and movement error of the machine tool, the roundness error of the probe sphere and the manufacturing error of the artifact, on the calibration accuracy are eliminated effectively. The pre-travel value of a certain high-precision probe was calibrated under actual conditions, and according to the calibration results the pre-travel compensation experiment of the touch trigger probe was carried out. The experiment results show that the calibration method is feasible and effective, can be implemented conveniently and has high calibration accuracy; and the On-Machine Measurement accuracy could be improved obviously.

Number of references: 18

Main heading: Calibration

Controlled terms: Experiments - Probes

Uncontrolled terms: Actual conditions - Artifact - Calibration accuracy - Calibration method - Manufacturing errors - On machine measurement - Pre travels - Touch trigger probes

Classification code: 901.3 Engineering Research - 941 Acoustical and Optical Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133416636179

Title: Preparation of mesophase asphalt-based carbon fiber

Authors: Hu, Jingbo¹; Zhou, Shisheng¹; Fang, Changqing¹/胡京博;周世生;方长青

Author affiliation: 1 College of Printing and Packing Engineering, Xi'an University of Technology, China

Corresponding author: Hu, J. (hujingbo1368@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 312

Monograph title: Applied Research and Engineering Solutions in Industry

Issue date: 2013

Publication year: 2013

Pages: 328-331

Language: English

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E-ISSN: 16627482

ISBN-13: 9783037856901

Document type: Conference article (CA)

Conference name: International Conference on Electrical Information and Mechatronics, ICEIM 2012

Conference date: December 23, 2012 - December 25, 2012

Conference location: Jiaozuo, China

Conference code: 96004

Sponsor: Chinese Academy of Science; Society of Intelligent Aerospace Systems, China; Linear Motor Committees of China Electrotechnical Society; Zhejiang University; Beihang University

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: This article have reviewed the preparation processes, flow path and methods of today's high-performance mesophase asphalt-based carbon fiber, and illustrated the advantages of preparation of high performance asphalt-based carbon fiber. Besides, today's main methods of preparation of asphalt-based carbon fiber have been found, and the key problems of preparation of high performance carbonfiber have been figured out. It is very complex and difficult to control accurately. Preparation of mesophase asphalt-based carbon fiber is mainly reflected in the following points: (1) The selection of asphalt; (2) The quality of the spinning; (3) The effect of oxidation treatment; (4) The temperature during carbonization and graphitization process. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Asphalt

Controlled terms: Carbon fibers - Carbonization - Technology

Uncontrolled terms: Asphalt-based - Flow path - Graphitization process -

Mesophases - Oxidation treatments - Preparation - Preparation process

Classification code: 411.1 Asphalt - 445.1 Water Treatment Techniques - 804 Chemical Products Generally - 901 Engineering Profession

DOI: 10.4028/www.scientific.net/AMM.312.328

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133416646959

Title: Three-dimensional numerical simulation of $\phi 300$ mm Czochralski crystal growth in a horizontal magnetic field

Authors: Jiang, Lei¹ ; Liu, Ding¹ ; Zhao, Yue¹ ; Jiao, Shang-Bin¹/姜雷;刘丁;赵跃;焦尚彬

Author affiliation: 1 National United Crystal Growth Equipment and System Integration Engineering Research Center, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Jiang, L. (jjyyeng@gmail.com)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 193-198

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: A two-dimensional axisymmetric and three-dimensional mixed numerical models were designed for Czochralski silicon single crystal growth in horizontal magnetic field. The results show that the exact distribution of temperature and velocity can be calculated only through three-dimensional simulation due to non-axial symmetry of the horizontal magnetic field. The stream function of melt and the shape of solid-liquid interface also have non-axial symmetry, and such non-axial symmetry changes with magnetic field intensity. The increase of crystal rotation velocity is favorable for the decrease of the non-axial symmetry of the solid-liquid interface shape, changing the unevenness of the interface shape. The increasing crucible rotation enhances the uniformity of temperature distribution in the melt, however, the radial temperature gradient of the melt increases.

Number of references: 9

Main heading: Crystal symmetry

Controlled terms: Computer simulation - Crystal orientation - Magnetic fields - Numerical models - Three dimensional

Uncontrolled terms: Czochralski silicon - Exact distribution - Horizontal magnetic fields - Magnetic-field intensity - Radial temperature gradients - Solid-liquid interfaces - Three dimensional simulations - Three-dimensional numerical simulations

Classification code: 701.2 Magnetism: Basic Concepts and Phenomena - 723.5 Computer Applications - 921 Mathematics - 933.1.1 Crystal Lattice

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133416646274

Title: A sliding mode variable structure-based direct power control strategy for doubly fed induction generator

Authors: Li, Shengmin¹ ; He, Huanhuan¹ ; Zhang, Yukun¹ ; Zheng, Yuan¹/李生民;何欢欢;张玉坤;郑元

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: He, H. (418906294@qq.com)

Source title: Dianwang Jishu/Power System Technology

Abbreviated source title: Dianwang Jishu

Volume: 37

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 2006-2010

Language: Chinese

ISSN: 10003673

CODEN: DIJIES

Document type: Journal article (JA)

Publisher: Power System Technology Press, China Electric Power Research Institute, Qinghe, Beijing, 100085, China

Abstract: In allusion to the dependence of traditional vector control on parameters of doubly fed induction generator and unfixed switching frequency of traditional direct power control strategy, a sliding mode variable structure-based direct power control strategy for doubly fed induction generator is proposed, in which the sliding mode variable structure control is integrated with voltage space vector pulse width modulation (SVPWM) technique and the active and reactive power of doubly fed induction generator are directly controlled by rotor voltage. A simulation model of the proposed control strategy is constructed in PSCAD environment to research the maximum power point tracking (MPPT) and decoupling control of active and reactive power of fed induction generation system. Simulation results show that the proposed control strategy possesses better parameter robustness and can ensure the quality of power output, and the effectiveness and feasibility of the proposed direct power control strategy are verified.

Number of references: 15

Main heading: Quality control

Controlled terms: Computer simulation - Pulse width modulation - Reactive power

Uncontrolled terms: Active and Reactive Power - Decoupling controls - Direct power - Doubly fed induction generator (DFIG) - Induction generation system - Maximum Power Point Tracking - Sliding mode variable structure control - Voltage space vectors

Classification code: 706 Electric Transmission and Distribution - 716 Telecommunication; Radar, Radio and Television - 723.5 Computer Applications - 913.3 Quality Assurance and Control

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133316623864

Title: Experimental research on the strength characteristic of unsaturated structural loess

Authors: Ma, Xiu-Ting^{1, 2}; Shao, Sheng-Jun^{1, 2}; Yang, Chun-Ming^{1, 2}; Li, Xiao-Lin^{1, 2}/马秀婷; 邵生俊;杨春鸣;李小林

Author affiliation: 1 Institute of Geo-engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shaanxi Key Laboratory of Loess Mechanics and Engineering, Xi'an 710048, China

Corresponding author: Shao, S.-J.

Source title: Yantu Gongcheng Xuebao/Chinese Journal of Geotechnical Engineering

Abbreviated source title: Yantu Gongcheng Xuebao

Volume: 35

Issue: SUPPL.1

Issue date: July 2013

Publication year: 2013

Pages: 68-75

Language: Chinese

ISSN: 10004548

CODEN: YGXUEB

Document type: Journal article (JA)

Publisher: Chinese Society of Civil Engineering, 34 Hujuguan, Nanjing, 210024, China

Abstract: The loess is structural and unsaturated. Direct shear tests on intact loess and remold loess are firstly carried out by controlling the matric suction of unsaturated soil. Then the effect of the matric suction on the net stress strength index, parameter ϕ_b in the Fredlund shear strength formula and parameter χ in the Bishop effective stress formula of unsaturated soil is analyzed respectively. The experimental results show that net stress strength index increases with the increasing matric suction, ϕ_b and χ decreases with the increasing matric suction, and under the same matric suction, the net stress strength index, ϕ_b and χ of the intact loess are all larger than those of the remold loess. Besides, the unconfined compressive strengths of the intact loess, remold loess and saturated loess are measured by means of the single axial compression instrument. According to the definition of structural indices, the structural index of intact loess and remold loess with different water contents are obtained based on the unconfined compressive strength. Finally, the relationship among the net stress strength index and parameters ϕ_b , χ and structural index is also explored. The values of ϕ_b and χ unsaturated loess have the monotonic variation with the structural index. Under the same configuration conditions, the values of ϕ_b and χ of the intact loess are greater than those of the remolded loess, which reflects the differences in structural traits of the two types of unsaturated soil.

Number of references: 7

Main heading: Sediments

Controlled terms: Compressive strength - Indexing (materials working) - Shear strength
- Soils

Uncontrolled terms: Different water contents - Experimental research - Loess -
Matric suctions - Strength - Strength characteristics - Unconfined compressive
strength - Unsaturated soil

Classification code: 421 Strength of Building Materials; Mechanical Properties - 483 Soil
Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 603.2 Machine Tool
Accessories

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133416649888

Title: Adaptive backstepping control of pneumatic servo system

Authors: Ren, Hai-Peng¹ ; Huang, Chao¹/任海鹏;黄超

Author affiliation: 1 Department of Information and Control Engineering, Xi'an University of
Technology, Xi'an, China

Source title: IEEE International Symposium on Industrial Electronics

Abbreviated source title: IEEE Int Symp Ind Electron

Monograph title: 2013 IEEE International Symposium on Industrial Electronics, ISIE 2013
 Issue date: 2013
 Publication year: 2013
 Article number: 6563773
 Language: English
 CODEN: 85PTAR
 ISBN-13: 9781467351942
 Document type: Conference article (CA)
 Conference name: 2013 IEEE 22nd International Symposium on Industrial Electronics, ISIE 2013
 Conference date: May 28, 2013 - May 31, 2013
 Conference location: Taipei, Taiwan
 Conference code: 98542
 Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States
 Abstract: Because of its high power-to-weight ratio, safe, clean and other advantages, pneumatic servo systems are widely applied in the factory automation and the other applications. However, due to the compressibility of gas and friction, the high precision control is a challenge and key problem of pneumatic servo system. In this paper, an adaptive backstepping controller is designed to control rodless cylinder using the proportional valve. The method has no requirement of the pressure sensors and the derivative calculation of the reference signal. The controller can be designed without the prior knowledge about the system model and the boundary of the model uncertainty. The controlled experiments are performed, the results show that the proposed method achieves better precision compared to some slide mode controllers. © 2013 IEEE.
 Number of references: 14
 Main heading: Controllers
 Controlled terms: Backstepping - Factory automation - Industrial electronics - Pneumatic drives - Pneumatic equipment - Pneumatic servomechanisms - Tracking (position) - Uncertainty analysis
 Uncontrolled terms: Adaptive back-stepping - Adaptive backstepping control - Backstepping design - High precision control - Mode control - Parameter adaption - Pneumatic servo systems - Pneumatic system
 Classification code: 922.1 Probability Theory - 921 Mathematics - 913.4.2 Computer Aided Manufacturing - 732.1 Control Equipment - 961 Systems Science - 716.2 Radar Systems and Equipment - 715 Electronic Equipment, General Purpose and Industrial - 714 Electronic Components and Tubes - 632.4 Pneumatic Equipment and Machinery - 716 Telecommunication; Radar, Radio and Television
 DOI: 10.1109/ISIE.2013.6563773
 Database: Compendex
 Compilation and indexing terms, © 2013 Elsevier Inc.
 9.
 Accession number: 20133416646258
 Title: A hysteresis current control method with neutral point potential balancing control for Vienna rectifier

Authors: Song, Weizhang¹ ; Huang, Jun¹ ; Zhong, Yanru¹ ; Wang, Lijuan¹/宋卫章;黄骏;钟彦儒;汪丽娟

Author affiliation: 1 Department of Electrical Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Song, W. (SWZ@xaut.edu.cn)

Source title: Dianwang Jishu/Power System Technology

Abbreviated source title: Dianwang Jishu

Volume: 37

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1909-1914

Language: Chinese

ISSN: 10003673

CODEN: DIJIES

Document type: Journal article (JA)

Publisher: Power System Technology Press, China Electric Power Research Institute, Qinghe, Beijing, 100085, China

Abstract: In allusion to inherent neutral point potential voltage fluctuation in three-phase three-level Vienna rectifier, it is pointed out to lead the neutral point voltage deviation at DC side into the hysteresis current control to implement the balance control of neutral point voltage at DC side via adjusting the DC offset of reference current. According to its equivalent circuit, the working principle of hysteresis current control for Vienna rectifier is analyzed and an outer-loop voltage controller is designed, and the foundation to choose the hysteresis width and the compensation coefficient of neutral point is given. Finally, a prototype of Vienna rectifier is constructed to validate the proposed hysteresis current control method, and experimental results show that the proposed control method not only possesses good static and dynamic performances as well as satisfactory neutral point voltage balancing characteristics, but also can make the Vienna rectifier having satisfactory grid-side performance.

Number of references: 19

Main heading: Electric rectifiers

Controlled terms: Electric current control - Electric inverters

Uncontrolled terms: Compensation coefficients - Hysteresis current control - Neutral point potential - Neutral point voltage deviations - Neutral-point potential balancing controls - Neutral-point voltage balancing - Static and dynamic performance - Vienna rectifiers

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 704.2 Electric Equipment - 714.2 Semiconductor Devices and Integrated Circuits

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20133416646947

Title: Accumulative roll bonding process of Ti-Zr-Mo alloy

Authors: Wang, Hua^{1, 2} ; Zhang, Yun-Peng¹ ; Chen, Xing-You³/王华;张云鹏;陈兴友

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Shaanxi University of Technology, Hanzhong 723000, China

3 Xi'an Gemei Metal Material Co. Ltd., Xi'an 710021, China

Corresponding author: Wang, H. (whclx@163.com)

Source title: Cailiao Rechuli Xuebao/Transactions of Materials and Heat Treatment

Abbreviated source title: Cailiao Rechuli Xuebao

Volume: 34

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 124-128

Language: Chinese

ISSN: 10096264

CODEN: JRXUDO

Document type: Journal article (JA)

Publisher: Editorial Office of Transactions of Materials, 18 Xueqing Road, Beijing, 100083, China

Abstract: Accumulative roll bonding (ARB) process for preparation of titanium-zirconium-molybdenum(TZM)alloy plate was investigated by theoretical analysis and experiments. The deformation resistance and the rolling force ARB process were calculated. The variations of tensile strength and microstructure of the ARB TZM alloy plate with ARB deformation were examined. The results show that the maximum tensile strength and the best interface bonding is obtained for the TZM plate after the accumulative roll bonding for three times. The grains are obviously refined to the size of 200-500 nm as the accumulative deformation increases. Additionally, the grains are elongated and the grains tend to be homogeneously distributed on the cross section of the plate, which are perpendicular to the rolling direction. The tensile strength of the TZM alloy plate manufactured by the ARB process increases by 50% of that of the base metal, with the maximum tensile strength and elongation of 968 MPa and 2%, respectively.

Number of references: 7

Main heading: Roll bonding

Controlled terms: Alloys - Deformation - Tensile strength - Zirconium

Uncontrolled terms: Accumulative roll bonding - Accumulative roll bonding (ARB) process - Deformation resistance - Grain refining - Interface bonding - Rolling direction - Rolling load - Strength and elongations

Classification code: 421 Strength of Building Materials; Mechanical Properties - 422

Strength of Building Materials; Test Equipment and Methods - 531.1 Metallurgy - 535.1

Metal Rolling - 549.3 Nonferrous Metals and Alloys excluding Alkali and Alkaline Earth Metals

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20133416634635

Title: A bijection between lattice-valued filters and lattice-valued congruences in residuated lattices

Authors: Wei, Wei1 ; Qiang, Yan2 ; Zhang, Jing1/魏巍;;;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

2 College of Computer Science and Technology, Taiyuan University of Technology, Taiyuan 030024, China

Corresponding author: Wei, W. (weiwei@xaut.edu.cn)

Source title: Mathematical Problems in Engineering

Abbreviated source title: Math. Probl. Eng.

Volume: 2013

Issue date: 2013

Publication year: 2013

Article number: 908623

Language: English

ISSN: 1024123X

E-ISSN: 15635147

Document type: Journal article (JA)

Publisher: Hindawi Publishing Corporation, 410 Park Avenue, 15th Floor, 287 pmb, New York, NY 10022, United States

Abstract: The aim of this paper is to study relations between lattice-valued filters and lattice-valued congruences in residuated lattices. We introduce a new definition of congruences which just depends on the meet \wedge and the residuum $\&rarr$. Then it is shown that each of these congruences is automatically a universal-algebra-congruence. Also, lattice-valued filters and lattice-valued congruences are studied, and it is shown that there is a one-to-one correspondence between the set of all (lattice-valued) filters and the set of all (lattice-valued) congruences. © 2013 Wei Wei et al.

Number of references: 17

Main heading: Engineering

Controlled terms: Mathematical techniques

Uncontrolled terms: Bijections - Residuated lattices

Classification code: 901 Engineering Profession - 921 Mathematics

DOI: 10.1155/2013/908623

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20133416636116

Title: Analysis of fatigue of cylindrical roller bearing in printing press*

Authors: Wu, Jimei1 ; Chen, Yan1 ; Gao, Bo1 ; Yi, Tuanyong1/武吉梅;陈艳;高波;

Author affiliation: 1 Printing and Packing Engineering Institute, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Jimei, W.

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 312

Monograph title: Applied Research and Engineering Solutions in Industry

Issue date: 2013
Publication year: 2013
Pages: 25-28
Language: English
ISSN: 16609336
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Document type: Conference article (CA)
Conference name: International Conference on Electrical Information and Mechatronics, ICEIM 2012
Conference date: December 23, 2012 - December 25, 2012
Conference location: Jiaozuo, China
Conference code: 96004
Sponsor: Chinese Academy of Science; Society of Intelligent Aerospace Systems, China; Linear Motor Committees of China Electrotechnical Society; Zhejiang University; Beihang University
Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
Abstract: By means of considering improved Lundberg-Palmgren(L-P) fatigue life theory and rollers and other comprehensive factors, a model of fatigue life is setup for eccentric double row cylindrical roller bearing under rotation. On this basis, the calculation flow chart is given and the fatigue life is calculated. Then come to the conclusions that the fatigue life of bearing is influenced by radial load, rotating speed, radial clearance. © (2013) Trans Tech Publications, Switzerland.
Number of references: 7
Main heading: Cylindrical roller bearings
Controlled terms: Fatigue of materials - Presses (machine tools)
Uncontrolled terms: Double row cylindrical roller bearing - Radial clearance - Radial loads - Rotating speed
Classification code: 421 Strength of Building Materials; Mechanical Properties - 601.2 Machine Components - 603.1 Machine Tools, General - 951 Materials Science
DOI: 10.4028/www.scientific.net/AMM.312.25
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.
13.
Accession number: 20133416636213
Title: New algorithm for ink trapping ratio based on transmittance
Authors: Yongchi, Xu1 ; Shisheng, Zhou1 ; Jinlin, Xu1/徐咏驰;周世生;徐锦林
Author affiliation: 1 Printing and Packing Engineering, Xi'an University of Technology, Xi'an, China
Corresponding author: Yongchi, X. (yongchixu@sina.com)
Source title: Applied Mechanics and Materials
Abbreviated source title: Appl. Mech. Mater.
Volume: 312
Monograph title: Applied Research and Engineering Solutions in Industry
Issue date: 2013

Publication year: 2013

Pages: 489-493

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037856901

Document type: Conference article (CA)

Conference name: International Conference on Electrical Information and Mechatronics, ICEIM 2012

Conference date: December 23, 2012 - December 25, 2012

Conference location: Jiaozuo, China

Conference code: 96004

Sponsor: Chinese Academy of Science; Society of Intelligent Aerospace Systems, China; Linear Motor Committees of China Electrotechnical Society; Zhejiang University; Beihang University

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durten, CH-8635, Switzerland

Abstract: To reflect the relationship between the trapping effect and colorimetric value of prints, this paper establishes an algorithm to calculate the ink trapping ratio. The new algorithm assumed that the second ink of two-color overprint solid forms an evenly distributed and thinner ink layer by keeping the total ink volume as constant and it employed the transmittance of single solid ink and overprint solid to compute the ratio of the thickness of the second ink layer printed on the first ink layer and on the blank paper on basis of Lambert's law. Because of the difficulties of measuring the transmittance of prints, it used the Clapper-Yule model to calculate them. To evaluate it, the ink trapping ratio computed by the densitometry method and the new algorithm for two sets of twocolor overprint solid were adopted to predict the spectral reflectance of them. By comparing the CIELAB color difference between the calculated and measured value of spectral reflectance, the proposed new algorithm is precisely defined and it improves the calculation accuracy of ink trapping. © (2013) Trans Tech Publications, Switzerland.

Number of references: 8

Main heading: Algorithms

Controlled terms: Charge trapping - Colorimetry - Reflection

Uncontrolled terms: Calculation accuracy - Clapper-Yule model - Densitometry -

Lambert's law - Measured values - Spectral reflectances - Transmittance - Trapping effects

Classification code: 711 Electromagnetic Waves - 712.1 Semiconducting Materials - 723 Computer Software, Data Handling and Applications - 921 Mathematics - 941.4 Optical Variables Measurements

DOI: 10.4028/www.scientific.net/AMM.312.489

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20133416646272

Title: Analysis on dynamic performance of low voltage ride-through of doubly fed induction generator considering main flux saturation and leakage flux saturation

Authors: Zhang, Wenjuan1 ; Gao, Yong2/张文娟;高勇

Author affiliation: 1 Department of Electron and Electricity Engineering, Baoji University of Arts and Sciences, Baoji 721007, Shaanxi Province, China

2 Automation and Information Engineering College, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Zhang, W. (zhangwj19811130@163.com)

Source title: Dianwang Jishu/Power System Technology

Abbreviated source title: Dianwang Jishu

Volume: 37

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Pages: 1995-1999

Language: Chinese

ISSN: 10003673

CODEN: DIJIES

Document type: Journal article (JA)

Publisher: Power System Technology Press, China Electric Power Research Institute, Qinghe, Beijing, 100085, China

Abstract: Due to the impacts of main flux saturation and leakage flux saturation of doubly fed induction generator (DFIG), its traditional linear model cannot accurately simulate the response characteristics of low voltage ride-through (LVRT). Through deriving state equation of DFIG under main flux saturation and leakage flux saturation in synchronous rotating reference frame, the relationship between damping coefficient of DFIG and main flux saturation and that between damping coefficient of DFIG and leakage flux saturation are researched; and the impacts of main flux saturation and leakage flux saturation on transient magnetic linkage attenuation process in stator and rotor of DFIG are discussed while three-phase short-circuit fault occurs at the position where the DFIG is connected to power grid. The correctness of theoretical analysis is verified by results of Matlab/Simulink simulation.

Number of references: 16

Main heading: Electric fault currents

Controlled terms: Damping - Dynamic response - Equations of state - Magnetic leakage

Uncontrolled terms: DFIG - Doubly fed induction generator (DFIG) - Doubly fed induction generators - Leakage flux - LVRT - Main flux saturations - Matlab/Simulink simulation - Rotating reference frame

Classification code: 408.1 Structural Design, General - 706.2 Electric Power Lines and Equipment - 708.4 Magnetic Materials - 921 Mathematics - 931.1 Mechanics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20133416636225

Title: Study of spot-color-matching in gravure

Authors: Zhang, Yan1 ; Zhou, Shisheng1 ; Cao, Congjun1 ; Feng, Bing1/张研;周世生;曹从军;;

Author affiliation: 1 Printing and Packaging Engineering, Xi'an University of Technology, Jin

Hua Nan Lu 5, 710048 Xi'an, China
Corresponding author: Zhang, Y. (rowfey@hotmail.de)
Source title: Applied Mechanics and Materials
Abbreviated source title: Appl. Mech. Mater.
Volume: 312
Monograph title: Applied Research and Engineering Solutions in Industry
Issue date: 2013
Publication year: 2013
Pages: 542-545
Language: English
ISSN: 16609336
E-ISSN: 16627482
ISBN-13: 9783037856901
Document type: Conference article (CA)
Conference name: International Conference on Electrical Information and Mechatronics, ICEIM 2012
Conference date: December 23, 2012 - December 25, 2012
Conference location: Jiaozuo, China
Conference code: 96004
Sponsor: Chinese Academy of Science; Society of Intelligent Aerospace Systems, China; Linear Motor Committees of China Electrotechnical Society; Zhejiang University; Beihang University
Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
Abstract: This paper expands the study of XUT-CAPT-V2.1 System, which developed by Xi'an University of Technology. It analyzes how the different factors, including additive (diluent), substrates, printing pressure and printing speed, influence the reproduction of spot color matching in gravure. The results show that it must firstly ensure the accuracy of color matching trend with the deliquating of the three primary colors, which use for matching in the experiments, and then keep the color matching effect as accurate as possible and the color gamut as wide as possible. On different substrates, the printing effect is different with the same ink. The density of ink is changed in according to different printing pressure and speed. © (2013) Trans Tech Publications, Switzerland.
Number of references: 5
Main heading: Color matching
Controlled terms: Color - Printing - Substrates
Uncontrolled terms: 1-systems - Color gamuts - Different substrates - Diluent - Matching effects - Printing speed - Spot color matching - Three primary colors
Classification code: 461 Bioengineering and Biology - 741.1 Light/Optics - 745.1 Printing - 801 Chemistry - 803 Chemical Agents and Basic Industrial Chemicals
DOI: 10.4028/www.scientific.net/AMM.312.542
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

20130907 新增 16 条

1.

Accession number: 20133516666436

Title: Short-term optimal operation of Xiaolangdi and Xixiayuan cascade hydropower stations

Authors: Bai, Tao¹ ; Chang, Jian-xia¹ ; Huang, Qiang¹ ; Chen, Guang-shen² ; Chai, Juan¹ ; Bai, Xia¹/白涛;畅建霞;黄强;;;

Author affiliation:

1 State Key Lab Cultivation Base of Northwest Arid Ecology and Hydraulic Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Yanbian branch of hydrology and water resources in Jilin province, Yanji 133001, China

Corresponding author: Bai, T. (baitao_xaut@yahoo.cn)

Source title: Energy Education Science and Technology Part A: Energy Science and Research

Abbreviated source title: Energy Educ. Sct. Technol. Part A. Energy Sci. Res.

Volume: 30

Issue: SUPPL.2

Issue date: 2012

Publication year: 2012

Pages: 21-26

Language: English

ISSN: 1308772X

Document type: Journal article (JA)

Publisher: Sila Science, University Mah Mekan Sok, No 24, Trabzon, Turkey

Abstract: As the famous hydraulic project in the world, Xiaolangdi hydraulic project has an important influence in water conservancy construction of China. The project is located at the exit of last gorge of the middle reach of the Yellow River, 130 km downstream of Sanmenxia reservoir, 128 km upstream of Huayuankou of Zhengzhou city, where in the key position for flood and sediment control of the Yellow River. The project adopts the bank loan, the international bidding construction, is divided three sign sections, and involves 51 countries and the area, 700 foreign merchants and Chinese ten thousand constructors. At present, the operation mode of Xiaolangdi hydropower station on the middle Yellow River had a major impact after the running of Xixiayuan. Based on analysis operation mode in short-term of Xiaolangdi hydropower station in this paper, cascade energy/efficiency maximization model were established, which solved by Accelerating Genetic Algorithm. Then the accuracy and stability of models were verified from the single and joint, conventional and optimization point of view. The results show that: through the compensation effect of Xixiayuan anti-regulation reservoir, the contradiction between water supply and power generation of Xiaolangdi hydropower station was solved. Moreover, water resources utilization of the comprehensive utilization reservoir and economic benefits of the power enterprise were enhanced. © Sila Science.

Number of references: 8

Main heading: Rivers

Controlled terms: Ice control - Reservoirs (water) - Water management - Water supply

Uncontrolled terms: Accelerating genetic algorithms - Anti regulations - Cascade hydropower stations - Compensation effects - Comprehensive utilizations - Sanmenxia Reservoir - Short-term optimal operation - Water resources utilizations
Classification code: 441.2 Reservoirs - 443.3 Precipitation - 444 Water Resources - 444.1 Surface Water - 446 Waterworks - 446.1 Water Supply Systems
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133516670935

Title: Study of artificial structural loess under true triaxial tests

Authors: Chen, Chang-Lu^{1, 2} ; Shao, Sheng-Jun³ ; Zhang, Zhe³/陈昌禄;邵生俊;张哲

Author affiliation:

1 Key Laboratory of Highway Construction and Maintenance Technology in Loess Region, Ministry of Transport, Shanxi Provincial Research Institute of Communication, Taiyuan 030003, China

2 Architecture and Civil Engineering, Bijie University, Bijie, Guizhou 551700, China

3 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Chen, C.-L. (changlu@139.com)

Source title: Yantu Lixue/Rock and Soil Mechanics

Abbreviated source title: Rock Soil Mech

Volume: 34

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 2231-2237

Language: Chinese

ISSN: 10007598

Document type: Journal article (JA)

Publisher: Academia Sinica, Wuhan, 430071, China

Abstract: Structural characteristic is an important basic property of natural loess. The authors have developed an artificial preparation of structural loess, improved the deficiencies of the original true triaxial apparatus and carried out the true triaxial tests of artificial structural loess. The results show that the method of artificial structural loess is reasonably reliable. At the same time, the variation of failure strength and residual strength of structural loess under complex stress conditions is analyzed. When the confining pressure is less than the structural strength of the structural loess soil, the stress-strain curves is softening, and on the contrary hardening. Mohr-Coulomb strength criterion is better to describe the residual strength variation of structural loess and significantly worse to describe the peak breaking strength variation of structural loess.

Number of references: 24

Main heading: Sediments

Controlled terms: Soil testing - Stress-strain curves

Uncontrolled terms: Artificial preparation - Complex stress condition - Mohr-Coulomb strength criterion - Strength variation - Structural characteristics - Structural loess - True triaxial apparatus - True triaxial tests
Classification code: 421 Strength of Building Materials; Mechanical Properties - 483 Soil Mechanics and Foundations - 483.1 Soils and Soil Mechanics - 921 Mathematics
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133516661306

Title: Distribution of residual stress fields in TC6 blade by LSP

Authors: Fang, Y.W.1 ; Zhao, S.H.1 ; Wang, Y.1 ; Sun, J.1 ; Li, P.Y.2/方英武;;;

Author affiliation:

1 Air Force Engineering University, Xi'an 710077, China

2 Xi'An University of Technology, Xi'an 710048, China

Corresponding author: Fang, Y.W. (fangyw72@126.com)

Source title: Surface Engineering

Abbreviated source title: Surf Eng

Volume: 29

Issue: 8

Issue date: September 2013

Publication year: 2013

Pages: 608-615

Language: English

ISSN: 02670844

E-ISSN: 17432944

CODEN: SUENET

Document type: Journal article (JA)

Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United Kingdom

Abstract: The aim was to analyse distribution rule of residual stress fields in a TC6 titanium alloy blade with multiple impacts and different spot overlapping ratios by comparing the numerical simulation and laser shock processing (LSP) experiments results. A dynamic model based on the finite element method was presented to simulate multiple impacts and different spot overlapping ratios by single sided LSP with round laser spot, and the distribution rule of residual stress fields based on different process condition was described. Further, LSP experiments of multiple impacts and different spot overlapping ratios were executed to compare the simulation results by measuring and fractographic observation. The results indicated that simulated values were reasonable with experimental values, and the compressive residual stresses were greatly increased and driven deeper below the blade surface with multiple impacts and high spot overlapping ratios on the same spot. © 2013 Institute of Materials, Minerals and Mining Published by Maney on behalf of the Institute.

Number of references: 22

Main heading: Residual stresses

Controlled terms: Computer simulation - Experiments
Uncontrolled terms: Compressive residual stress - Distribution of residual stress - Fractographic observations - Laser shock processing - Multiple impact - Overlapping ratio - Residual stress fields - TC6 blade
Classification code: 421 Strength of Building Materials; Mechanical Properties - 723.5 Computer Applications - 901.3 Engineering Research
DOI: 10.1179/1743294413Y.0000000174
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133516657880
Title: The detection method of the silicon melting process in the CZ single-crystal furnace
Authors: Lei, Jiang¹ ; Ding, Liu² ; Yue, Zhao² ; Shang-Bin, Jiao¹;/刘丁;赵跃;焦尚彬
Author affiliation:
1 National United Crystal Growth Equipment and System Integration Engineering Research Center, Xi'an University of Technology, Xi'an, 710048, China
2 Xi'an University of Technology, Xi'an, 710048, China
Source title: IEEE International Conference on Control and Automation, ICCA
Abbreviated source title: IEEE Int. Conf. Control Autom., ICCA
Monograph title: 2013 10th IEEE International Conference on Control and Automation, ICCA 2013
Issue date: 2013
Publication year: 2013
Pages: 1358-1362
Article number: 6565036
Language: English
ISSN: 19483449
E-ISSN: 19483457
ISBN-13: 9781467347075
Document type: Conference article (CA)
Conference name: 2013 10th IEEE International Conference on Control and Automation, ICCA 2013
Conference date: June 12, 2013 - June 14, 2013
Conference location: Hangzhou, China
Conference code: 98538
Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
Abstract: The Melting process is one of the main processes in the Czochralski method. Detecting the melting process is important for entire automation of the CZ crystal furnace. In regards to the furnace melting process, this paper presents a kind of image-based method to detect the size of the silicon ingot at later stages of the process. It could achieve the purpose of optimizing the heating power and process automation by monitoring the process. In the

summary of the basic characteristic of the image of melting process, this paper proposes an image processing method which integrates silicon ingot color features, a multi-scale morphological gradient, an improved watershed transformation and the Bhattacharyya distance to separate the silicon ingots from the image background. © 2013 IEEE.

Number of references: 14

Main heading: Metal melting

Controlled terms: Automation - Image processing - Ingots - Silicon

Uncontrolled terms: Basic characteristics - Bhattacharyya distance - Detection methods - Image processing - methods - Image-based methods - Multi-scale morphological gradients - Process automation - Watershed transformations

Classification code: 534.2 Foundry Practice - 712.1.1 Single Element Semiconducting Materials - 731 Automatic Control Principles and Applications - 732 Control Devices - 741 Light, Optics and Optical Devices

DOI: 10.1109/ICCA.2013.6565036

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133516658739

Title: Elasto-plastic analysis of a contact under normal and torque loading

Authors: Li, Pengyang^{1, 2} ; Wang, Zhanjiang^{2, 3} ; Chen, W. Wayne⁴ ; Jin, Xiaoqing² ; Li, Yan¹ ; Wang, Q. Jane²/李鹏阳;;;

Author affiliation:

1 Dept. of Mechanical Engineering and Automation, Xi'an University of Technology, Xi'an 710048, China

2 Dept. of Mechanical Engineering, Northwestern University, Evanston IL 60208, United States

3 State Key Laboratory of Mechanical Transmission, Chongqing University, Chongqing 400030, China

4 Smith Bits, Schlumberger Houston TX 77073, United States

Source title: American Society of Mechanical Engineers, Tribology Division, TRIB

Abbreviated source title: Am Soc Mech Eng Tribol Div TRIB

Monograph title: ASME/STLE 2012 International Joint Tribology Conference, IJTC 2012

Issue date: 2012

Publication year: 2012

Pages: 281-283

Language: English

ISBN-13: 9780791845080

Document type: Conference article (CA)

Conference name: ASME/STLE 2012 International Joint Tribology Conference, IJTC 2012

Conference date: October 7, 2012 - October 10, 2012

Conference location: Denver, CO, United states

Conference code: 98554

Publisher: American Society of Mechanical Engineers, 3 Park Avenue, New York, NY 10016-5990, United States

Abstract: A spinning rigid sphere pressed against an elasto-plastic half space under combined normal and torque loading is presented. The elastic results based on present method are compared with an analytical solution to validate the current model. Stresses, strains, and residual displacements are investigated. The effects of friction coefficient on the spinning and half space contacts are studied. The surface pressure, subsurface stress, von Mises stress, the first yield point, plastic strain fields and evolution of the plastic region are further analyzed. Results show that the application of the torque shifts the maximum von Mises stress and plastic region in the half space closer to the surface; the whole plastic region also moves near the surface. Moreover, the position of the first yield points becomes closer to the surface as well; the evolution of the plastic region shows more complex shapes than those only under a normal load condition. Copyright © 2012 by ASME.

Number of references: 14

Main heading: Loading

Controlled terms: Elasticity - Elastoplasticity - Geometry - Plate metal - Structural design - Tribology

Uncontrolled terms: Current modeling - Elasto-plastic analysis - Friction coefficients - Plastic strain fields - Residual displacement - Subsurface stress - Surface pressures - Von Mises stress

Classification code: 931 Classical Physics; Quantum Theory; Relativity - 921

Mathematics - 672 Naval Vessels - 535.1.2 Rolling Mill Practice - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 408.1 Structural Design, General

DOI: 10.1115/IJTC2012-61032

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133516668086

Title: Cloud droplets evolution algorithm for multi-objective optimization

Authors: Li, Wei1 ; Wang, Lei1 ; Wang, Bin1 ; Fei, Rong1 ; Hei, Xinghong1/李伟;王磊;王斌;费蓉;黑新宏

Author affiliation:

1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Wang, L. (wangleeei@163.com)

Source title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Abbreviated source title: Chin. Control Decis. Conf., CCDC

Monograph title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Issue date: 2013

Publication year: 2013

Pages: 681-686

Article number: 6561010

Language: English

ISBN-13: 9781467355322

Document type: Conference article (CA)
Conference name: 2013 25th Chinese Control and Decision Conference, CCDC 2013
Conference date: May 25, 2013 - May 27, 2013
Conference location: Guiyang, China
Conference code: 98686
Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States
Abstract: This paper presents a new optimization method (MOCDEA) called cloud droplets evolution algorithm which is applied to multi-objective optimization and engineering design problems. The fundamental concepts and ideas which underlie the proposed algorithm is inspired from nature and based on the observation of cloud formation process and phase transformation of the matter. The proposed algorithms are compared with a number of other well-known optimization algorithms and the experimental results suggest that MOCDEA is able to provide better performance. © 2013 IEEE.
Number of references: 18
Main heading: Drops
Controlled terms: Evolutionary algorithms - Multiobjective optimization - Phase transitions
Uncontrolled terms: Cloud droplets - Cloud formation process - Engineering design problems - Evolution algorithms - Fundamental concepts - Multi objective - Optimization algorithms - Optimization method
Classification code: 443.1 Atmospheric Properties - 723 Computer Software, Data Handling and Applications - 801.4 Physical Chemistry - 921 Mathematics - 921.5 Optimization Techniques
DOI: 10.1109/CCDC.2013.6561010
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133516670792
Title: The sensitivity analysis of Duncan-Chang E-B model parameters based on the orthogonal test method
Authors: Li, Yan-Long¹ ; Li, Shou-Yi¹ ; Ding, Zhan-Feng² ; Tu, Xing¹/李炎隆;李守义;
Author affiliation:
1 State Key Laboratory of Eco-hydraulic Engineering in Shaanxi, Xi'an University of Technology, Xi'an 710048, China
2 China Northwest Municipal Engineering Design and Research Institute Co., Ltd., Xi'an 710075, China
Corresponding author: Li, Y.-L. (lylong2356@126.com)
Source title: Shuili Xuebao/Journal of Hydraulic Engineering
Abbreviated source title: Shuili Xuebao
Volume: 44
Issue: 7
Issue date: July 2013

Publication year: 2013

Pages: 873-879

Language: Chinese

ISSN: 05599350

CODEN: SLHPBI

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: Duncan-Chang E-B model can reflect the relationship of stress and deformation of rockfill materials under different confining pressures, therefore it has been widely applied in the numerical calculation of stress and deformation of the concrete faced rockfill dam. Based on the orthogonal test method, the concrete faced rockfill dam is taken as examples in this paper to conduct the sensitivity analysis of Duncan-Chang E-B model parameters, and study the sensitivity of various parameters to the vertical settlement displacement of the dam and the horizontal displacement of upstream and downstream. The results of the study show that among the Duncan-Chang E-B model parameters, the sensitivity of K_b , ϕ_0 and K are relatively large on the vertical displacement of the dam; ϕ_0 , K and R_f have a relatively appreciable influence on the horizontal displacement of upstream; K_b , ϕ_0 and K have a relatively great influence on the horizontal displacement of downstream; the value of model parameters have the most significant effect on the horizontal displacement of upstream; the sensitivity of m , $\Delta\phi$ and n have a relatively small influence on the results of dam deformation. The research methods and results of this paper can provide a reference for selecting the Duncan-Chang E-B model parameters of concrete faced rockfill dam.

Number of references: 13

Main heading: Rock mechanics

Controlled terms: Concretes - Dams - Deformation - Rocks - Sensitivity analysis - Testing

Uncontrolled terms: Concrete faced rockfill dam - Different confining pressures - Horizontal displacements - Numerical calculation - Orthogonal test method - Rock fill materials - Stress and deformation - Vertical displacements

Classification code: 502.1 Mine and Quarry Operations - 481.1 Geology - 441.1 Dams - 921 Mathematics - 422.2 Strength of Building Materials : Test Methods - 421 Strength of Building Materials; Mechanical Properties - 412 Concrete - 422 Strength of Building Materials; Test Equipment and Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133516666508

Title: Research on optimal scheduling of agricultural reservoir group in Shenzhen

Authors: Lu, Shi-bao^{1, 3} ; Qu, Ji-hong² ; Liu, Ren-yuan^{4/;;;}

Author affiliation:

1 State Key Laboratory of Simulation and Regulation of Water Cycle in River Basin, China
Institute of Water Resources and Hydropower Research, Beijing 100038, China

2 North China University of Water Resources and Electric Power, Zhengzhou 450011, China

3 National Research Center for Hydropower Sustainable Development, Beijing 100038, China

4 Northwest Arid Regions Eco-hydrology Engineering, Key Laboratory Cultivation Base Xi'an
University of Technology, Xi'an 710048, China

Corresponding author: Lu, S.-B. (lu5111284@yahoo.com.cn)

Source title: Energy Education Science and Technology Part A: Energy Science and
Research

Abbreviated source title: Energy Educ. Sct. Technol. Part A. Energy Sci. Res.

Volume: 30

Issue: SUPPL.2

Issue date: 2012

Publication year: 2012

Pages: 517-524

Language: English

ISSN: 1308772X

Document type: Journal article (JA)

Publisher: Sila Science, University Mah Mekan Sok, No 24, Trabzon, Turkey

Abstract: Water supply is integral to urban development of Shenzhen. Optimal scheduling of middle and western reservoir group in Shenzhen was conducted in this paper. Besides analyzing water income for river basins and water demands from users, the law of evaporation and infiltration as well as environmental indexes for water quality of each reservoir shall be considered according to local water usage conditions. Fours plans were established based on two scenarios and multi-purpose optimal scheduling plan was deduced. Based on the actual water supply system for middle and western reservoir group, this method chooses main control parameters for possible operation conditions and gets satisfactory scheduling plan through human-computer dialogue testing. This method requires simple calculation without curse of dimensionality, thus suitable for reservoir group scheduling under complex conditions. © Sila Science.

Number of references: 3

Main heading: Reservoirs (water)

Controlled terms: Environmental regulations - Optimization - Scheduling - Urban
growth - Water quality - Water supply - Water supply systems

Uncontrolled terms: Agricultural reservoirs - Complex condition - Curse of
dimensionality - Human-computer dialogues - Main control
parameters - Multi-purpose - Operation conditions - Optimal scheduling

Classification code: 921.5 Optimization Techniques - 912.2 Management - 454.2

Environmental Impact and Protection - 453.2 Water Pollution Control - 446.1 Water Supply
Systems - 441.2 Reservoirs - 403.1 Urban Planning and Development

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20133516670855

Title: CuInS₂ thin films prepared by sulfurization of Cu-In precursors

Authors: Ma, Jianping1 ; Gao, Yang1/马建平;高阳

Author affiliation:

1 Department of Electronic Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Ma, J. (majp@xaut.edu.cn)

Source title: Taiyangneng Xuebao/Acta Energiae Solaris Sinica

Abbreviated source title: Taiyangneng Xuebao

Volume: 34

Issue: 6

Issue date: June 2013

Publication year: 2013

Pages: 1010-1014

Language: Chinese

ISSN: 02540096

CODEN: TYNPDG

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: CuInS₂ thin films were prepared by sulfurization of the Cu-In metallic precursors in sulfur atmosphere, the influences of annealing temperature and annealing time on the films properties were studied. Characterization of The relationship between the microstructure, composition and optical properties of CuInS₂ thin films and the preparation process was investigated by X-ray diffraction(XRD), energy dispersive spectroscopy(EDS) and spectrophotometer. The results explicitly revealed that the proper annealing conditions can improve the crystallization of the films and remove the binary impure phase effectively; the In and S elements of the films would loss at the conditions of high annealing temperature and long time annealing process. The optical properties of the films are excellent, the samples absorption coefficient as high as 104cm⁻¹ were obtained.

Number of references: 8

Main heading: Film preparation

Controlled terms: Annealing - Copper - Energy dispersive spectroscopy - Optical properties - Thin films - X ray diffraction

Uncontrolled terms: Absorption co-efficient - Annealing condition - Annealing temperatures - Energy dispersive spectroscopies (EDS) - Metallic precursor - Precursor - Preparation process - Sulfurization

Classification code: 931.3 Atomic and Molecular Physics - 801 Chemistry - 741.1

Light/Optics - 714.2 Semiconductor Devices and Integrated Circuits - 712.1 Semiconducting Materials - 544.1 Copper - 537.1 Heat Treatment Processes

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20133516668901

Title: Fault-tolerant mining algorithm of sampling data from dynamic system

Authors: Shaolin, Hu1, 2 ; Ye, Li2 ; Dong, Zhang1/胡绍林;李晔;张冬

Author affiliation:

1 State Key Laboratory of Astronautics, P.O. Box 505-16, Xi'an 710043, China

2 Automation School, Xi'an University of Technology, Xi'an, 230027, China

Source title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Abbreviated source title: Chin. Control Decis. Conf., CCDC

Monograph title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Issue date: 2013

Publication year: 2013

Pages: 4927-4931

Article number: 6561826

Language: English

ISBN-13: 9781467355322

Document type: Conference article (CA)

Conference name: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Conference date: May 25, 2013 - May 27, 2013

Conference location: Guiyang, China

Conference code: 98686

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Time series data mining is an useful tool for us to design data-driven condition monitoring as well as fault diagnosis system. Aiming at monitoring abnormal changes of dynamic process, a series of mining algorithms are built up to mine signal form, model structure of process and statistical properties of noise in sampling data series, the architecture of information mining system of sampling time series is set up. These algorithms are very fault tolerant for patchy outliers in sampling data set of the complex system. Results given in this paper can be used not only in the safety analysis and fault diagnosis of complicated dynamic process but also in change detection as well as other related fields. © 2013 IEEE.

Number of references: 10

Main heading: Data mining

Controlled terms: Algorithms - Condition monitoring - Time series

Uncontrolled terms: Change detection - Fault diagnosis

systems - Fault-tolerant - Information mining - Mining algorithms - Safety analysis - Statistical properties - Time series data mining

Classification code: 603 Machine Tools - 706 Electric Transmission and

Distribution - 723 Computer Software, Data Handling and Applications - 921

Mathematics - 922.2 Mathematical Statistics

DOI: 10.1109/CCDC.2013.6561826

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20133416655031

Title: A New Stereo Matching Method Based on the Adaptive Support-Weight Window

Authors: Sui, Liansheng¹ ; Gao, Bo¹ ; Zhang, Bo¹/隋连升;高波;张博

Author affiliation:

1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, 710048,

China

Source title: Communications in Computer and Information Science

Abbreviated source title: Commun. Comput. Info. Sci.

Volume: 346

Monograph title: Multimedia and Signal Processing : Second International Conference, CMSP 2012 hanghai, China, December 7-9, 2012 Proceedings

Issue date: 2012

Publication year: 2012

Pages: 146-153

Language: English

ISSN: 18650929

ISBN-13: 9783642352850

Document type: Conference article (CA)

Conference name: 2012 International Conference on Multimedia and Signal Processing, CMSP 2012

Conference date: December 7, 2012 - December 9, 2012

Conference location: Shanghai, China

Conference code: 98845

Sponsor: Shanghai University of Electric Power; Springer; APNNA; NSFC

Publisher: Springer Verlag, Tiergartenstrasse 17, Heidelberg, D-69121, Germany

Abstract: We propose a new stereo matching approach based on the adaptive support-weight of local window. First, we use the truncated absolute differences cost function to compute the disparity space image. Second, we redefine the support-weight of a local window which is evaluated according to two factors such as color difference and space distance between a pixel and its center pixel in the local window. Finally, we aggregate the matching cost based on the support weight and use the winner-take-all method to compute the disparity map. In order to improve method's speed, we design an efficient support-weight calculation way. The results of the experiment show that our approach can compute the accurate disparity than other methods.

© Springer-Verlag Berlin Heidelberg 2012.

Number of references: 20

Main heading: Pixels

Controlled terms: Signal processing

Uncontrolled terms: Absolute difference - Color difference - Disparity map - Disparity spaces - Stereo matching - Stereo matching method - support-weight - Winner take alls

Classification code: 716.1 Information Theory and Signal Processing - 723.5 Computer Applications

DOI: 10.1007/978-3-642-35286-7_19

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20133516660552

Title: Optimized trapezoid convolution windows for harmonic analysis

Authors: Wen, He1 ; Teng, Zhaosheng1 ; Wang, Yong1 ; Yang, Yuxiang2/;;杨宇祥

Author affiliation:

1 College of Electrical and Information Engineering, Hunan University, Changsha City 410082, China

2 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an City 710048, China

Source title: IEEE Transactions on Instrumentation and Measurement

Abbreviated source title: IEEE Trans. Instrum. Meas.

Volume: 62

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 2609-2612

Article number: 6545285

Language: English

ISSN: 00189456

CODEN: IEIMAO

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: The new window class, which is generated by multiple time-convolution of optimized trapezoid windows, is presented. It is shown that the trapezoid windows can achieve different sidelobe and main lobe behaviors by adjusting the lengths of the lower and upper bases of an isosceles trapezoid. This is to say, in order to obtain the good sidelobe behaviors and narrow main lobe width, the optimization procedure can be applied by adjusting the normalized ratio between the lengths of the upper and lower bases of a trapezoid. Thus, a new window class having both an extremely narrow main lobe width and high sidelobe behavior is generated with the optimized trapezoid windows being the parent windows. The estimators of the frequency, amplitude, and phase for harmonic analysis is provided by using the classical interpolation fast Fourier transform algorithm based on the proposed windows. The efficiency of new windows in high-accuracy harmonic analysis is demonstrated through computer simulations. © 1963-2012 IEEE.

Number of references: 11

Main heading: Harmonic analysis

Controlled terms: Computer simulation - Convolution - Discrete Fourier transforms - Frequency estimation - Optimization - Signal processing - Windows

Uncontrolled terms: Convolution windows - Fast Fourier transform algorithm - High-accuracy - Isosceles trapezoid - Main lobes - Optimization procedures - Side lobes - Spectral leakage

Classification code: 402 Buildings and Towers - 716.1 Information Theory and Signal Processing - 723.5 Computer Applications - 921 Mathematics

DOI: 10.1109/TIM.2013.2255990

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20133516671274

Title: Evaluation of the AquaCrop model for simulating the impact of water deficits and different irrigation regimes on the biomass and yield of winter wheat grown on China's Loess Plateau

Authors: Xiangxiang, Wang^{1, 2}; Quanjia, Wang^{1, 3}; Jun, Fan^{1, 2}; Qiuping, Fu^{1, 2}; 王全九^{1, 2, 3}

Author affiliation:

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2 Graduate University of Chinese Academy of Science, Beijing 100039, China

3 Institute of Water Resource Research, Xian University of Technology, Xian 710048, China

Corresponding author: Quanjia, W. (wquanjia@163.com)

Source title: Agricultural Water Management

Abbreviated source title: Agric. Water Manage.

Volume: 129

Issue date: November 2013

Publication year: 2013

Pages: 95-104

Language: English

ISSN: 03783774

CODEN: AWMADF

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: Accurate models of crop growth are important for evaluating the effects of water deficits on crop yield or productivity. AquaCrop was developed by the FAO (Food and Agricultural Organization) of the United Nations to simulate yield responses to changes in the supply of water. The objectives of this study were to evaluate the model's ability to simulate winter wheat performance under full and deficit water conditions on China's Loess Plateau and to study the effect of different irrigation scenarios on wheat yield. The model's output was compared to experimental data collected between 2006 and 2011 at the Changwu Agri-ecological Station on the Loess Plateau. The model accurately estimated the soil water content of the root zone as well as the biomass and grain yields of winter wheat. When simulating the soil water during the 2008-2009 growing season, the calculated values of r^2 , RMSE, ME, and the d-index were 0.98, 8.4mm, 0.98, and 0.99 for no irrigation; 0.95, 14.4mm, 0.93, and 0.98 for double irrigation; 0.88, 22.9mm, 0.68, and 0.90 for triple irrigation; and 0.93, 17.5mm, 0.75, and 0.9 for quadruple irrigation, respectively. For the grain yield, the r^2 values for the model's outputs under the single irrigation, double irrigation, triple irrigation, and quadruple irrigation treatments were 0.80, 0.98, 0.99, and 0.77, respectively. Comparing to no irrigation the highest increases in grain yield were observed for scenarios in which irrigation was applied during the over-wintering and turning green stages. Moreover, the simulations indicated that under double irrigation regimes, water can be withheld during over-wintering and either turning green or stem elongation without greatly reducing yields. The minimum amounts of irrigation water required to achieve high WUE

in wet, normal and dry years were 225, 150 and 150mm, respectively. © 2013.

Number of references: 40

Main heading: Irrigation

Controlled terms: Crops - Ecology - Grain (agricultural product) - Landforms - Soil moisture - Water resources - Water supply

Uncontrolled terms: China's loess plateaux - Food and agricultural organizations - Irrigation regimes - Irrigation treatments - Model calibration - Model validation - Northern China - Soil water content

Classification code: 821.4 Agricultural Products - 821.3 Agricultural Methods - 483.1 Soils and Soil Mechanics - 481.1 Geology - 454.3 Ecology and Ecosystems - 446.1 Water Supply Systems - 444 Water Resources

DOI: 10.1016/j.agwat.2013.07.010

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20133516668696

Title: Modified projective synchronization of fractional-order chaotic systems based on active sliding mode control

Authors: Yan, Xiaomei¹ ; Du, Qi² ; Shang, Ting¹/阎晓妹;刘丁;尚婷

Author affiliation:

1 Faculty of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 School of Business, Xi'an University of Finance and Economy, Xi'an 710010, China

Source title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Abbreviated source title: Chin. Control Decis. Conf., CCDC

Monograph title: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Issue date: 2013

Publication year: 2013

Pages: 3853-3858

Article number: 6561621

Language: English

ISBN-13: 9781467355322

Document type: Conference article (CA)

Conference name: 2013 25th Chinese Control and Decision Conference, CCDC 2013

Conference date: May 25, 2013 - May 27, 2013

Conference location: Guiyang, China

Conference code: 98686

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: For modified projective synchronization of fractional-order chaotic systems, this paper presents an active sliding mode control method. Based on the stability theorem of fractional-order system, stability of the error system is analyzed. Two examples of modified projective synchronization are performed respectively, which include two identical

fractional-order systems (Lu⁺-Lu⁺) and two different fractional-order systems (Lu⁺-Liu⁺).

Numerical simulations illustrate the effectiveness of the proposed method. © 2013 IEEE.

Number of references: 15

Main heading: Chaotic systems

Controlled terms: Sliding mode control

Uncontrolled terms: Active sliding mode controls - Error systems - Fractional order - Fractional-order chaotic systems - Fractional-order systems - Modified projective synchronization - Stability theorems

Classification code: 731.1 Control Systems - 921 Mathematics - 931 Classical Physics; Quantum Theory; Relativity - 961 Systems Science

DOI: 10.1109/CCDC.2013.6561621

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20133516670650

Title: Microstructure numerical simulation of weld pool in rapid solidification

Authors: Zhang, Min¹; Wang, Qiang¹; Li, Jihong¹; Li, Lin¹; Zhi, Jinhua¹; Luo, Hailong¹/张敏;汪强;李继红;李琳;支金花;;

Author affiliation:

1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Hanjie Xuebao/Transactions of the China Welding Institution

Abbreviated source title: Hanjie Xuebao

Volume: 34

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1-4+28

Language: Chinese

ISSN: 0253360X

CODEN: HHPAD2

Document type: Journal article (JA)

Publisher: Harbin Research Institute of Welding, No. 111 He-Xing Lu, Harbin, China

Abstract: Based on grain formation principle and kinetics characteristics of dendrite growth, two-dimensional mathematical and physical model of nucleation, dendrite growth, redistribution and diffusion of the solute were established to simulate the columnar-to-equiaxed transition in rapid solidification process of welding molten pool and the influence of different cooling rate on this transition process was also studied. The results show that, the solute redistribution and diffusion are evident in the process of rapid cooling. When the columnar grains transform into equiaxed grains, the discharged solute makes concentration sharply increased at the tip of columnar grain, which inhibits the growth of columnar crystals. Moreover, the change will be more likely to occur at higher cooling rate, and the required time will be also shorter.

Number of references: 10
Main heading: Grain growth
Controlled terms: Cellular automata - Cooling - Electric welding - Growth kinetics - Textures
Uncontrolled terms: Columnar-to-equiaxed transition - Kinetics characteristics - Rapid cooling - Rapid solidification process - Solute redistribution - Transition - Transition process - Weld pool
Classification code: 933.1.2 Crystal Growth - 933 Solid State Physics - 921 Mathematics - 723 Computer Software, Data Handling and Applications - 641.2 Heat Transfer - 538.2.1 Welding Processes - 461.2 Biological Materials and Tissue Engineering
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20133516670784
Title: Microscopic hydraulic behavior from the interactions between uneven-sized wet particles and liquid bridge
Authors: Zhang, Zhao1 ; Liu, Feng-Yin1 ; Zhang, Guo-Ping2 ; Zheng, Fang1/张昭;刘凤银;张国平;郑芳
Author affiliation:
1 Institute of Geotechnical Engineering, Xi'an University of Technology, Xi'an 710048, China
2 Department of Civil and Environmental Engineering, Louisiana State University, Baton Rouge 70803, United States
Corresponding author: Liu, F.-Y. (fyliu@pub.xaonline.com)
Source title: Shuili Xuebao/Journal of Hydraulic Engineering
Abbreviated source title: Shuili Xuebao
Volume: 44
Issue: 7
Issue date: July 2013
Publication year: 2013
Pages: 810-817
Language: Chinese
ISSN: 05599350
CODEN: SLHPBI

Document type: Journal article (JA)

Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China

Abstract: Soil particle-level investigation of basic behavior for unsaturated soil is increasingly concerned by soil mechanics researchers. It seems easier to recognize microscopic hydraulic behavior of wet particulate material such as unsaturated soil by analyzing the interaction between wet particles and liquid bridge. A theoretical model for the interaction between uneven-sized wet particles and liquid bridge is proposed, consisting of an assumed toroid-shaped liquid bridge in contact with corresponding smooth particles, at a separation determined by their actual surface roughness. The volume and capillary force of the liquid bridge between them are related to matric suction, ratio of particle radius, solid-liquid contact angles, and roughness of the

particles. In addition, equilibrium between liquid and liquid vapor is also analyzed. Finally, the model can be in good accordance with the test data of capillary force versus particle separation in the past literature.

Number of references: 31

Main heading: Liquids

Controlled terms: Particles (particulate matter) - Soil mechanics - Soils - Surface roughness - Vapors

Uncontrolled terms: Capillary force - Hydraulic behavior - Liquid bridge - Matric suctions - Particle separation - Particulate materials - Theoretical modeling - Unsaturated soil

Classification code: 483.1 Soils and Soil Mechanics - 804 Chemical Products

Generally - 931.2 Physical Properties of Gases, Liquids and Solids - 951 Materials Science

Database: Compendex

20130914 新增 17 条

1.

Accession number: 20133516679264

Title: Automatic measuring and controlling system of weighing lysimeter based on LabVIEW and ARM processors

Authors: Guo, Huijun¹ ; Zhang, Jianfeng² ; Wang, Zhilin² ; Geng, Xiaojiang²/郭会军;张建丰;王志林;耿小江

Author affiliation: 1 College of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Institute of Water Resources, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, J. (jfzhang@mail.xaut.edu.cn)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 16

Issue date: August 15, 2013

Publication year: 2013

Pages: 134-141

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: With the great developments of agricultural productions and concerned research projects needs in China, the use of direct methods using lysimeters for measuring water and solute flow in soils has increased in recent years. Large weighable lysimeters were best suitable

for obtaining reliable data about seepage water quantity and quality. The field lysimeters combined the advantages of true field conditions and laboratory possibilities of varying parameters, handling and maintenance. Instrumentation varied due to the specific needs of each application. In order to provide a unified software and hardware platforms and system configuration scheme for the automatic measuring and controlling lysimeters, a new method using the LabVIEW and ARM processors was proposed in this paper. The systems proposed consisted of three sections: the tank holding the main soil body, the weighing and load control system, the supervisory control and data acquisition system. The weighing and load control system, which were the core parts in the lysimeter, consisted of a precise electric balance with high resolution, multi-stage lever systems and an intelligent load control system. The balance, with resolution up to 0.1 g, connected with the host computer by RS232 bi-directional interface. To improve the reliability and accuracy of weighing system further, an intelligent load control system was developed based on the LPC1768 MCU, which communicated with the host computer via the RS485 interface. The supervisory control and data acquisition system mainly consisted of the data acquisition units, the communication module and the host computer. Also the data acquisition units controlling the digital sensors were developed based on the LPC1768 MCU. In the whole monitoring system, these data acquisition units functioned as the bottom nodes, which receiving commands from the host computer, collecting sampled data from various sensors and sending data back to the host computer in real time. Considering the reliability of the measuring system, advanced digital sensors from Decagon were selected in this system, which could measure the soil's temperature, water content, electric conductivity (EC), water potential, etc. These digital sensors with very low power requirements and excellent specifications, connected with the data acquisition units by RS232 interface with 150ms measurement time. Meanwhile, the host computer controlled these data acquisition units via RS485 communication interfaces adopting MODBUS protocol. So under this working mode, these intelligent units worked in the RTU mode. The measurement system of the seepage and the control system of the drainage were also designed based on the LPC1768 MCU, which connected with the host computer via the RS485 communication interfaces. Considering the actual needs of remote monitoring, a flexible and economical GPRS module with RS485 interface was adopted to let the host computer report its state periodically to the operators via short message. The host computer system consisted of an industrial personal computer and the measure-control software which was developed with LabVIEW and had characteristic of the friendly human-computer interface. In this software, the sensor's type, quantity and sampling parameters could be configured. Meanwhile, flexible signal processing algorithms, including timed loop technique, moving averaging and median filter, were adopted to improve the accuracy further. Under this two-stage structure, the host computer controlled the whole systems, the data could be displayed and analyzed in real-time. The experimental results showed that the resolution of the Lysimeters was up to 0.0072mm.

Number of references: 28

Main heading: Soil surveys

Controlled terms: ARM processors - Communication - Computer programming languages - Computer software - Control systems - Data acquisition - Evapotranspiration - Interface states - Lysimeters - Measurements - Seepage - Sensors - Signal processing - Soils - Water supply - Weighing

Uncontrolled terms: Agricultural productions - Data-acquisition units - Human computer interfaces - Industrial personal computers - LabVIEW - Signal processing algorithms - Software and hardwares - System

Classification code: 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments - 731.1 Control Systems - 801 Chemistry - 931 Classical Physics; Quantum Theory; Relativity - 932 High Energy Physics; Nuclear Physics; Plasma Physics - 941 Acoustical and Optical Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 943.3 Special Purpose Instruments - 723 Computer Software, Data Handling and Applications - 407 Maritime and Port Structures; Rivers and Other Waterways - 441 Dams and Reservoirs; Hydro Development - 444.1 Surface Water - 721 Computer Circuits and Logic Elements - 446.1 Water Supply Systems - 716 Telecommunication; Radar, Radio and Television - 716.1 Information Theory and Signal Processing - 483.1 Soils and Soil Mechanics

DOI: 10.3969/j.issn.1002-6819.2013.16.017

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133516679220

Title: Intelligence identification for multi-class shaft centerline orbit of hydropower unit based on improved SVM model

Authors: Guo, Pengcheng¹; Li, Hui¹; Yuan, Jiangxia¹; Luo, Xingqi¹/郭鹏程;李辉;袁江霞;罗兴琦

Author affiliation: 1 School of Hydropower Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Luo, X. (luoxq@xaut.edu.cn)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 15

Issue date: August 1, 2013

Publication year: 2013

Pages: 65-71

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: In the fault diagnosis system of hydropower units, the shaft centerline orbit is an important feature for the recognition of the unit operating condition, and different types of shaft centerline orbits reflect different operation state and fault information of shaft centerline orbit.

In the actual operation of hydropower unit, there are few fault samples for shaft centerline orbits. Hence, the intelligent fault diagnosis cannot be performed accurately, and this problem must be solved with the combination of the corresponding spectral characteristics. Aimed at this problem, based on the improved support vector machine, a multi-fault classification algorithm was presented, the Hu invariant moment data of shaft centerline orbit graph were selected as training sample of the classification system, the error threshold level was inducted to effectively control category interference phenomenon, and a multi-fault shaft centerline orbits classifier was set up. Furthermore, it was applied to carry out the fault diagnosis of hydropower units. Results of the fault diagnosis application showed that just a few measured samples of shaft centerline orbits and a certain number of stimulated samples were needed in order to establish a fault classifier with superior performance, when the number of samples was 16 and 50, the classification accuracy was up to 96.3% and 91.2%, and the four different shapes of shaft centerline orbit graphs such as double ring-shaped, eight-shaped, ellipse-shaped and banana-shaped can be clearly distinguished. Meanwhile, the classification accuracy increased with an increase in the number of classification and the classification accuracy decreased rapidly with an increase in the number of sample, that is to say, the number of classification and the number of sample had an important influence on the classification accuracy. In addition, the optimum classification surface of invariant line moment can be obtained by adjustment of kernel function coefficient, the ability of multi-category classification can be obviously improved by introduction of distinct matrix, and it has been successfully verified in four different classifications. This fault classifier can realize the identification and diagnosis of multi-faults. And it has both the advantages of simple algorithm and strong capacity in pattern classification for multi-fault shaft centerline orbits. So the result provides a reference for the intelligent fault diagnosis of shaft centerline orbits of hydropower units with few fault samples.

Number of references: 28

Main heading: Orbits

Controlled terms: Algorithms - Classifiers - Experiments - Failure analysis - Fault detection - Hydroelectric power - Support vector machines

Uncontrolled terms: Centerlines - Classification algorithm - Fault diagnosis applications - Hydropower units - Intelligent fault diagnosis - Linear moments - Multi-category classification - Spectral characteristics

Classification code: 901.3 Engineering Research - 802.1 Chemical Plants and Equipment - 723 Computer Software, Data Handling and Applications - 921 Mathematics - 655.2 Satellites - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties - 611.1 Hydroelectric Power Plants

DOI: 10.3969/j.issn.1002-6819.2013.15.009

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133616692382

Title: Terahertz radiation generated by laser induced plasma in photoconductive antenna

Authors: Hou, Lei¹ ; Chen, Suguo¹ ; Yan, Zhijin¹ ; Shi, Wei¹/侯磊;陈素果;;施卫

Author affiliation: 1 Applied Physics Department, Xi'an University of Technology, Xi'an 710048,

China

Source title: IEEE Journal of Quantum Electronics

Abbreviated source title: IEEE J. Quantum Electron.

Volume: 49

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 785-789

Article number: 6570530

Language: English

ISSN: 00189197

CODEN: IEJQA7

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: To theoretically analyze the spectral characteristics of terahertz (THz) electromagnetic radiation generated by photoconductive antennas, the paper proposed a model by considering laser induced plasma in photoconductive antenna. At a bias voltage, plasma oscillation generates Langmuir wave that propagates in the inhomogeneous plasma in the direction of density gradient, and is converted to THz radiation after a converse zone. The influence factors of the bandwidth and peak frequency are analyzed by the model and testified by experiment. © 2013 IEEE.

Number of references: 22

Main heading: Laser produced plasmas

Controlled terms: Electromagnetic wave emission - Microwave antennas - Plasma oscillations - Plasmas - Terahertz waves

Uncontrolled terms: Density gradients - Inhomogeneous plasma - Langmuir waves - Laser induced plasma - Photoconductive antennas - sheath - Spectral characteristics - Terahertz radiation

Classification code: 711 Electromagnetic Waves - 716 Telecommunication; Radar, Radio and Television - 932.3 Plasma Physics

DOI: 10.1109/JQE.2013.2275019

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133516679613

Title: Software survivability evaluation method based on software calling structure

Authors: Hou, Yuqiao^{1, 2}; Qu, Yu¹; Liu, Linfeng¹; Zheng, Qinghua^{1, 2}; Liu, Ting¹; Zheng, Chao^{1, 2}; Yang, Zijiang³;;;

Author affiliation: 1 Key Laboratory for Intelligent Networks and Network Security, Ministry of Education, Xi'an Jiaotong University, Xi'an 710049, China

2 Department of Computer Science and Technology, Xi'an Jiaotong University, Xi'an 710049, China

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China

Corresponding author: Liu, T. (tingliu@mail.xjtu.edu.cn)

Source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)/Journal of Central South University (Science and Technology)

Abbreviated source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)

Volume: 44

Issue: SUPPL.1

Issue date: 2013

Publication year: 2013

Pages: 443-448

Language: Chinese

ISSN: 16727207

CODEN: ZDXZAC

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: A new method was proposed to evaluate the survivability of the software system based on the calling structure of the software. Firstly, the interactions among the components of the software were obtained using the static lexical analysis technology and dynamic monitoring of the AOP (Aspect ORIENTED PROGRAMming). The calling network was constructed to model the calling structure of the software. Secondly, a component failure simulation method was proposed by removing the nodes and edges corresponding to the selected components from the calling network. The residual calling network was considered as the software calling structure when the components are disabled. Then, the survivability coefficient was presented to measure the survivability of the software system, the proportion of the biggest connected subgraph of the residual network compared to the original call network diagram. In the experiments, nine open source software projects were selected to compare their survivability, and 20 versions of Struts (J2EE framework) were chosen to investigate the changes of the software survivability during their updating. Our evaluation concurs with the intuition that minor upgrades, aimed at fixing bugs and adding minor functionality quickly, reduce software survivability, whereas major upgrades, which normally clean up messy code and re-construct the software, improve software quality.

Number of references: 16

Main heading: Program debugging

Controlled terms: Aspect oriented programming - Complex networks - Computer software selection and evaluation - Software engineering

Uncontrolled terms: Component failures - Connected Subgraph - Dynamic monitoring - Lexical analysis - Network diagrams - Open source software projects - Software Quality - Survivability evaluation

Classification code: 722 Computer Systems and Equipment - 723 Computer Software, Data Handling and Applications - 723.1 Computer Programming

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

Accession number: 20133516678837

Title: Design and experimental study of two-wavelength single-longitudinal-mode erbium-doped fiber ring laser

Authors: Jiao, Mingxing¹ ; Xing, Junhong¹ ; Tong, Congwei¹ ; Liu, Yun¹/焦明星;邢俊红;同聪维;刘芸

Author affiliation: 1 Department of Precision Instruments, School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an, Shaanxi 710048, China

Corresponding author: Jiao, M. (jiaomx@xaut.edu.cn)

Source title: Zhongguo Jiguang/Chinese Journal of Lasers

Abbreviated source title: Zhongguo Jiguang

Volume: 40

Issue: 6

Issue date: June 2013

Publication year: 2013

Article number: 0602013

Language: Chinese

ISSN: 02587025

CODEN: ZHJIDO

Document type: Journal article (JA)

Publisher: Science Press, 18,Shuangqing Street,Haidian, Beijing, 100085, China

Abstract: In order to produce the orthogonally and linearly polarized dual-frequency laser output at 1550 nm, a two-wavelength single-longitudinal-mode erbium-doped fiber (EDF) laser with a structure of compound ring cavity is designed, which employs a polarization-maintaining fiber Bragg grating as the wavelength selector, and uses a saturable absorber of an unpumped EDF as laser single-longitudinal-mode selector. The basic principles of single longitudinal-mode selection of both compound ring cavity and unpumped EDF saturable absorber have been briefly introduced, the effect of the unpumped EDF length on the single-longitudinal-mode selection is theoretically analyzed, and the two-wavelength laser oscillating characteristics are investigated experimentally on different longitudinal-mode selection occasions. The experimental results show that the EDF laser with a compound ring cavity in which both a polarization-maintaining fiber Bragg grating and an unpumped EDF saturable absorber are included can steadily output orthogonally and linearly polarized two-wavelength single-longitudinal-mode laser at 1550 nm, and the wavelength spacing is approximately 0.344 nm. Such a two-wavelength single-longitudinal-mode fiber laser will find wide applications in the fields of laser sensing and measuring system, dense wavelength division multiplexing (DWDM) optical fiber communications, and so on.

Number of references: 14

Main heading: Dense wavelength division multiplexing

Controlled terms: Fiber Bragg gratings - Fiber lasers - Fibers - Lasers - Light polarization - Polarization - Polarization-maintaining fiber - Ring lasers - Saturable absorbers - Wavelength

Uncontrolled terms: Dual-frequency lasers - Erbium doped fiber laser - Erbium doped fiber ring lasers - Erbium doped fibers - Linearly polarized - Ring cavities - Single longitudinal mode - Two-wavelength lasers

Classification code: 812 Ceramics, Refractories and Glass - 744.1 Lasers, General - 744 Lasers - 817 Plastics and Other Polymers: Products and Applications - 741 Light, Optics and Optical Devices - 717 Optical Communication - 716 Telecommunication; Radar, Radio and Television - 718 Telephone Systems and Related Technologies; Line Communications

DOI: 10.3788/CJL201340.0602013

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133516682320

Title: Progress of pulsed jet technology in study and application

Authors: Li, Jun1, 2 ; Cao, Yong-Mei2/李军;

Author affiliation: 1 Xi'an University of Technology, Xi'an, 710048, China

2 North China University of Water Resources and Electric Power, Zhengzhou, 450011, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 341-342

Monograph title: Energy Research and Power Engineering

Issue date: 2013

Publication year: 2013

Pages: 506-510

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857588

Document type: Conference article (CA)

Conference name: 2013 International Conference on Energy Research and Power Engineering, ERPE 2013

Conference date: May 24, 2013 - May 25, 2013

Conference location: Zhengzhou, Henan, China

Conference code: 99014

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Jet pump was widely used in the realm of water conservancy and aerospace. The trouble of lower efficiency on transfer restricted its rapid development and further application. A large number of experimental studies showed that its efficiency could be improved by pulsed jet, and pulsed jet generated in the device had higher impact on object. Based on massive literatures, generation ways of pulsed jet and study marches of excited pulsed jet were introduced briefly. At the same time, the progress in study and application of self-excited pulsed oscillation jet were focused on. Furthermore, in view of the domestic present situation of reservoir dredging, the next researches of jet dredging combination with artificial density-flow were prospected. © (2013) Trans Tech Publications, Switzerland.

Number of references: 17

Main heading: Oscillating flow

Controlled terms: Jet pumps - Research - Water management
Uncontrolled terms: Artificial density-flow - Its efficiencies - Present situation -
Pulsed jets - Self excited oscillation - Study and applications - Water conservancy
Classification code: 444 Water Resources - 446 Waterworks - 618.2 Pumps - 631.1
Fluid Flow, General - 901.3 Engineering Research
DOI: 10.4028/www.scientific.net/AMM.341-342.506
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133516678779

Title: Mining frequent trajectory using FP-tree in GPS data

Authors: Li, Junhuai¹ ; Wang, Jinqin¹ ; Liu, Hailing² ; Yu, Lei¹ ; Zhang, Jing¹/李军怀;;于蕾;张璟

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Corresponding author: Li, J. (lijunhuai@xaut.edu.cn)

Source title: Journal of Computational Information Systems

Abbreviated source title: J. Comput. Inf. Syst.

Volume: 9

Issue: 16

Issue date: August 15, 2013

Publication year: 2013

Pages: 6555-6562

Language: English

ISSN: 15539105

Document type: Journal article (JA)

Publisher: Binary Information Press, P.O. Box 162, Bethel, CT 06801-0162, United States

Abstract: Pervasiveness of location-acquisition technologies makes it convenient to collect the movement data of moving objects, and the spatial-temporal information contained implicitly in the historical trajectories unveils important knowledge about movement behaviors. This paper presents a novel frequent trajectory mining method using FP-Tree. Most existing approaches transform trajectories into sequences of popular region-ids using a statically predefined grid of cells with the same size, and then merge popular cells into larger popular regions. However, due to the size of these popular regions have not been limited, the movements of objects in the region may be lost. And predefined grid may be lack of adaptability. This study defines a Boundary Function to limit the maximum size of the popular regions and selects the size of the grid dynamically by defining a distance threshold d . Then, an improved FP-Tree algorithm is proposed to mine frequent trajectories. The experimental results show our method is efficient. © 2013 Binary Information Press.

Number of references: 8

Main heading: Trees (mathematics)

Controlled terms: Forestry - Global positioning system - Mining - Trajectories

Uncontrolled terms: Boundary function - FP tree - GPS data - Movement behavior
- Movement datum - Moving objects - Spatial temporals - Trajectory minings
Classification code: 404.1 Military Engineering - 502.1 Mine and Quarry Operations -
716.3 Radio Systems and Equipment - 821.0 Woodlands and Forestry - 921.4
Combinatorial Mathematics, Includes Graph Theory, Set Theory
DOI: 10.12733/jcisP0732
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133516679017

Title: Simulation analysis on influences of distributed photovoltaic generation on short-circuit current in distribution network

Authors: Liu, Jian¹ ; Lin, Tao² ; Tong, Xiangqian³ ; Li, Long² ; Zhang, Zhihua¹/刘建;林涛;同向前;;

Author affiliation: 1 Shaanxi Electric Power Research Institute, Xi'an 710054, Shaanxi Province, China

2 State Grid Corporation of China, Xicheng District, Beijing 100031, China

3 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi Province, China

Corresponding author: Liu, J.

Source title: Dianwang Jishu/Power System Technology

Abbreviated source title: Dianwang Jishu

Volume: 37

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 2080-2085

Language: Chinese

ISSN: 10003673

CODEN: DIJIES

Document type: Journal article (JA)

Publisher: Power System Technology Press, China Electric Power Research Institute, Qinghe, Beijing, 100085, China

Abstract: To address the challenge due to connecting distributed photovoltaic (PV) generation to distribution network, based on the circuit topology of grid-connecting inverter of PV generation and its control strategy the simulation analysis on variation of output current characteristics of grid-connecting inverter under three-phase short-circuit fault and interphase short-circuit fault occurred in distribution network as well as that under different output of distributed PV generation are performed; meanwhile, the simulation analysis on variation of output current characteristics of grid-connecting inverter under open-circuit of insulated gate bipolar transistor (IGBT) device of the inverter and single-phase disconnection fault occurred in AC side are carried out. All simulation results show that whether three-phase fault or interphase

fault occurs in distribution network, the short-circuit current output by grid-connecting inverter does not exceed 1.5 times of its rated current, and the approaches to cope with fault occurred in the inverter itself are put forward.

Number of references: 15

Main heading: Electric network analysis

Controlled terms: Electric network topology - Electric power distribution - Insulated gate bipolar transistors (IGBT) - Photovoltaic cells - Short circuit currents

Uncontrolled terms: Control strategies - Distribution automation - Photovoltaic generation - Rated currents - Short-circuit fault - Simulation analysis - Single-phase disconnection faults - Three phase faults

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 703.1 Electric Networks - 703.1.1 Electric Network Analysis - 706.1.2 Electric Power Distribution - 714.2 Semiconductor Devices and Integrated Circuits

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20133516682686

Title: Investigations of fatigue performance of S135 drill pipe steel under uniaxial loading

Authors: Luo, She-Ji^{1, 2}; Wang, Rong¹; Zhao, Kang²; 赵康

Author affiliation: 1 School of Materials Science and Engineering, Xi'an Shiyou University, Xi'an 710065, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 716

Monograph title: Materials Science and Technology II

Issue date: 2013

Publication year: 2013

Pages: 418-422

Language: English

ISSN: 10226680

ISBN-13: 9783037857137

Document type: Conference article (CA)

Conference name: 2013 2nd International Conference on Materials Science and Technology, ICMST 2013

Conference date: April 11, 2013 - April 12, 2013

Conference location: Hong Kong, China

Conference code: 99017

Sponsor: Hong Kong Education Society; Singapore Management and Sports Science Institute; Trans Tech Publications inc.

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The fatigue life of S135 drill pipe steel was investigated by means of tension-compression loading and torsion loading under uniaxial loading during the fatigue test.

The quantitative formulas of fatigue life were obtained by regression analysis method, and the fatigue fracture mechanism was analyzed. The results show that a linear correlation was found between fatigue life and effective stress in the double logarithmic plots. Cracks initiated from the specimens surfaces under tension-compression loading as well as torsion loading. For the tension-compression fatigue and the torsion fatigue specimens, the main characteristics for cracks propagation were striations and sheares ripple marks, respectively. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Fatigue of materials

Controlled terms: Cracks - Drill pipe - Fatigue testing - Materials science -

Regression analysis - Steel pipe - Torsional stress

Uncontrolled terms: Fatigue fracture mechanisms - Fatigue performance - Linear correlation - Quantitative formula - Regression analysis methods -

Tension-compression - Tension-compression loading - Torsion fatigue

Classification code: 421 Strength of Building Materials; Mechanical Properties - 422.2

Strength of Building Materials : Test Methods - 511.2 Oil Field Equipment - 545.3 Steel -

922.2 Mathematical Statistics - 951 Materials Science

DOI: 10.4028/www.scientific.net/AMR.716.418

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20133516679248

Title: Advances in research of controlled drainage for crop production and environmental protection

Authors: Luo, Wan1 ; Li, Shan1 ; Jia, Zhonghua1 ; Liu, Wenlong1 ; Pan, Yanxin1 ; Wu, Di1/罗纨; 李山;贾忠华;刘文龙;潘延鑫;武迪

Author affiliation: 1 Northwest Key Laboratory of Water Resources and Environment Ecology, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Luo, W. (wluo@mail.xaut.edu.cn)

Source title: Nongye Gongcheng Xuebao/Transactions of the Chinese Society of Agricultural Engineering

Abbreviated source title: Nongye Gongcheng Xuebao

Volume: 29

Issue: 16

Issue date: August 15, 2013

Publication year: 2013

Pages: 1-6

Language: Chinese

ISSN: 10026819

CODEN: NGOXEO

Document type: Journal article (JA)

Publisher: Chinese Society of Agricultural Engineering, Agricultural Exhibition Road South, Beijing, 100026, China

Abstract: Controlled drainage, also known as water table management, is an environmental friendly agricultural water management practice. It has been widely advocated in recent years to reduce drainage discharge in order to reduce agricultural non-point source pollution while ensuring crop production. Further research and application of the controlled drainage are of great importance to drainage system design and water management in a changing environment. In this paper, we reviewed the development history, multiple functions and research advances of the controlled drainage in China and the world. The development of controlled drainage technique has experienced several stages, advancing from its original purpose of water conservation to later goals of nutrient loss reduction, and irrigation water saving etc. Implementation of controlled drainage can be performed easily with water level control structures installed at the outlet of drainage ditch or pipe. However, properly schedule water level adjustment at the outlet remains a challenge, considering the variable weather conditions and different crop drainage requirements. In saline agricultural environment, controlled drainage has to meet the requirement of salinity control. Existing research has demonstrated that controlled drainage can achieve multiple benefits in reducing nutrient losses and conserving water in humid regions, and controlling soil salinity and saving irrigation water in arid and semi-arid regions. Controlled drainage in coastal regions has additional benefits of reducing rain water losses and lowering the risk of salt water intrusion. While controlled drainage research in China is relatively lagged behind, this water table management technique has long been used by grass root farmers to reduce drainage intensity for less irrigation requirement. For many areas in China, where rice and dry foot crop are rotationally cultured, controlled drainage has the advantages of adjusting drainage intensity flexibly to meet moisture level requirement of different crops. The present need in controlled drainage is to make appropriate water level control schedules that are easy to implement and consistent with local crop production requirement. Computer modeling has been widely used to examine long term effect of controlled drainage on hydrology and nitrogen losses. DRAINMOD model is the mostly used simulation tool that predicts outcome of different drainage system layout under variable weather, soil and cropping conditions; the nitrogen module-DRAINMOD_NII enables the model to predict nitrogen losses from drained agricultural fields under different water management, tillage and fertilization practices. Lacking of field observations is the major obstacle in applying modeling approach for controlled drainage research in China. In summary, we conclude that controlled drainage is a necessary practice for modern agricultural drainage; providing benefits in regulating soil moisture in the drained fields, reducing nutrient losses, saving irrigation water use and increasing rainwater use, controlled drainage is the best practice for drainage water management for sustainable agricultural development.

Number of references: 38

Main heading: Environmental management

Controlled terms: Arid regions - Crops - Cultivation - Drainage - Groundwater - Irrigation - Level control - Nitrogen - Nutrients - Research - Soil conservation - Soil moisture - Water conservation - Water levels - Water management - Water quality - Water supply

Uncontrolled terms: Agricultural environments - Agricultural non-point source pollutions - Agricultural water management - Arid and semi-arid regions - Salinity - Sustainable agricultural development - Water - savings - Water table management

Classification code: 483.1 Soils and Soil Mechanics - 502 Mines and Quarry Equipment and Operations - 614.2 Steam Power Plant Equipment and Operation - 454.1 Environmental Engineering, General - 731.3 Specific Variables Control - 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 901.3 Engineering Research - 804 Chemical Products Generally - 453.2 Water Pollution Control - 406 Highway Engineering - 442 Flood Control; Land Reclamation - 443 Meteorology - 401 Bridges and Tunnels - 444 Water Resources - 446 Waterworks - 446.1 Water Supply Systems - 444.2

Groundwater

DOI: 10.3969/j.issn.1002-6819.2013.16.001

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20133516679135

Title: Effect of the concentration of starting solution on morphology and photocatalytic property of BiVO₄

Authors: Ma, Zhan-Ying^{1, 2}; Yao, Bing-Hua¹; He, Yang-Qing¹/马占营;姚秉华;何仰清

Author affiliation: 1 Department of Applied Chemistry, Xi'an University of Technology, Xi'an 710054, China

2 College of Chemistry and Chemical Engineering, Xianyang Normal University, Xianyang 712000, China

Corresponding author: Yao, B.-H.

Source title: Gongneng Cailiao/Journal of Functional Materials

Abbreviated source title: Gongneng Cailiao

Volume: 44

Issue: 13

Issue date: July 15, 2013

Publication year: 2013

Pages: 1847-1851+1855

Language: Chinese

ISSN: 10019731

CODEN: GOCAEA

Document type: Journal article (JA)

Publisher: Journal of Functional Materials, P.O. Box 1512, Chongqing, 630700, China

Abstract: A series of BiVO₄ photocatalysts were synthesized via hydrothermal process. XRD, SEM, TGA, UV-Vis diffusion spectra were employed to characterize the phase structure, morphology and optical absorption properties of the samples. Using the degradation of MB as a model reaction, the photocatalytic property of the BiVO₄ was detected. Results indicated that the concentration of starting solution had an important effect on the morphological evolution and photocatalytic property of BiVO₄. When c(Bi³⁺) was 0.01, 0.05 and 0.1, 0.5 mol/L, the obtained BiVO₄ samples possessed "seaweed-like", "cobblestone-like" and "potato-like" morphology, respectively. "seaweed-shaped" and "cobblestone-shaped" BiVO₄ exhibited better photocatalytic property than "potato-shaped" BiVO₄, and the decolorization efficiency of MB solution reached about 75% at 180min. In addition, the formation mechanisms of BiVO₄ with

different morphology were discussed in detail.

Number of references: 17

Main heading: Morphology

Controlled terms: Photocatalysis - Seaweed - Synthesis (chemical)

Uncontrolled terms: BiVO₄ - Formation mechanism - Hydrothermal process -

Morphological evolution - Optical absorption properties - Photocatalytic property -

Solution concentration - Starting solutions

Classification code: 471.1 Oceanography, General - 802.2 Chemical Reactions - 951

Materials Science

DOI: 10.3969/j.issn.1001-9731.2013.13.006

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20133516679318

Title: Fully secure anonymous identity-based broadcast encryption scheme

Authors: Sun, Jin1, 2 ; Hu, Yu-Pu2/孙瑾;胡予璞

Author affiliation: 1 Department of Application Mathematics, Xi'an University of Technology, Xi'an 710048, China

2 Key Lab of Computer Network and Information Security, Xidian University, Xi'an 710071, China

Corresponding author: Sun, J. (oksunjin@163.com)

Source title: Shanghai Jiaotong Daxue Xuebao/Journal of Shanghai Jiaotong University

Abbreviated source title: Shanghai Jiaotong Daxue Xuebao

Volume: 47

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1103-1108

Language: Chinese

ISSN: 10062467

CODEN: SCTPDH

Document type: Journal article (JA)

Publisher: Shanghai Jiao Tong University, 2200 Xietu Rd no.25,, Shanghai, 200032, China

Abstract: A fully secure anonymous identity-based broadcast encryption scheme was proposed by combining the Waters dual system encryption with the orthogonality property of composite-order bilinear groups. Based on the standard model without tags, the scheme can achieve constant-size key and ciphertext which constrain three group exponents, respectively. The scheme is proved by using the three static assumptions which do not depend on the number of queries the attacker makes. Furthermore, the analysis results indicate that the scheme proposed in this paper is fully secure and can satisfy the higher efficiency and practice requirement.

Number of references: 13

Main heading: Cryptography

Controlled terms: Mathematical models - Technology

Uncontrolled terms: Broadcast encryption - Dual system encryptions - Identity based cryptography - Provably secure - Standard model

Classification code: 716 Telecommunication; Radar, Radio and Television - 717 Optical Communication - 718 Telephone Systems and Related Technologies; Line Communications - 723 Computer Software, Data Handling and Applications - 901 Engineering Profession - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20133516681189

Title: The realization of equipment status monitoring system driven by task stage

Authors: Tong, Xu Feng¹ ; Zhang, Dong Xia² ; Baoa, Ru Han¹;/张东霞;

Author affiliation: 1 School of Electronic Mechanical Engineering, Xidian University, Xi'an, China

2 Department of English, Xi'an University of Technology, Xi'an, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 333-335

Monograph title: Measurement Technology and Engineering Researches in Industry

Issue date: 2013

Publication year: 2013

Pages: 1695-1698

Language: English

ISSN: 16609336

E-ISSN: 16627482

ISBN-13: 9783037857502

Document type: Conference article (CA)

Conference name: 2013 2nd International Conference on Measurement, Instrumentation and Automation, ICMIA 2013

Conference date: April 23, 2013 - April 24, 2013

Conference location: Guilin, China

Conference code: 99005

Sponsor: Korea Maritime University; Hong Kong Industrial Technology Research Centre; Inha University

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The equipment resource planning is considered during the procedure of job schedules in manufacturing enterprises. Based on the analysis of interaction between production task and equipment status, a task driven equipment status monitoring system is presented. Through the development of an analyzer, the system can regulate the equipment status automatically according to the perform stage of production tasks and provide the adequate equipment information for job schedules. Finally, the application examples are introduced and the

characteristics of the system are summarized as well. © (2013) Trans Tech Publications, Switzerland.

Number of references: 7

Main heading: Equipment

Controlled terms: Monitoring - Scheduling

Uncontrolled terms: Application examples - Equipment information - Manufacturing enterprise - Monitoring system - Resource planning - Status monitoring - Task-driven

Classification code: 901 Engineering Profession - 912.2 Management - 941 Acoustical and Optical Measuring Instruments - 942 Electric and Electronic Measuring Instruments - 943 Mechanical and Miscellaneous Measuring Instruments - 944 Moisture, Pressure and Temperature, and Radiation Measuring Instruments

DOI: 10.4028/www.scientific.net/AMM.333-335.1695

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20133616687774

Title: Drag effects of urban-rural digital divide on urbanization: Evidence From China's panel data

Authors: Xie, Xinglong¹ ; Qi, Dewei¹/谢兴龙;齐德伟

Author affiliation: 1 Economics and Management Institute, Xi'an University of Technology, Xi'an, 710048, China

Corresponding author: Xie, X. (long86886@yahoo.com.cn)

Source title: LISS 2012 - Proceedings of 2nd International Conference on Logistics, Informatics and Service Science

Abbreviated source title: LISS - Proc. Int. Conf. Logist., Informatics Serv. Sci.

Monograph title: LISS 2012 - Proceedings of 2nd International Conference on Logistics, Informatics and Service Science

Issue date: 2013

Publication year: 2013

Pages: 1141-1147

Language: English

ISBN-13: 9783642320538

Document type: Conference article (CA)

Conference name: 2nd International Conference on Logistics, Informatics and Service Science, LISS 2012

Conference date: July 12, 2012 - July 15, 2012

Conference location: Beijing, China

Conference code: 98629

Sponsor: National Natural Science Foundation of China (NSFC); K.C. Wong Education Foundation; Springer; The University of Reading

Publisher: Springer Netherlands, Van Godewijkstraat 30, Dordrecht, 3311 GZ, Netherlands

Abstract: The aim of this study is to gauge the drag of China's urban-rural digital divide (URDD)

on urbanization. The study, drawing on Romer's thought concerning growth drag, employing the Cobb-Douglas production function and an urbanization equation, derives the drag equation of URDD's impact on urbanization. Using the co-integration methodology, unit root tests, and the panel data of provinces in China over the period from 2000 to 2009, this study documents an existence of drag and calculates its value of 6.38%, indicating that the velocity for China's urbanization declines 6.38% in the case of drag, relative to without the drag limitation. The study also finds that in the knowledge-based digital epoch, digital techniques and awareness need to be cultivated and enhanced for rural residents, specifically the digital qualifications, with an objective of accelerating the urbanization process and achieving an equilibrium development for urban-rural areas. The study concludes with limitations and fields for future research. © Springer-Verlag Berlin Heidelberg 2013.

Number of references: 17

Main heading: Economic and social effects

Controlled terms: Drag - Information science - Knowledge based systems - Rural areas

Uncontrolled terms: Cobb-Douglas production function - Digital divide - Digital epochs - Digital techniques - Information - Rural residents - Unit root tests - Urbanization

Classification code: 651.1 Aerodynamics, General - 723.4.1 Expert Systems - 821 Agricultural Equipment and Methods; Vegetation and Pest Control - 903 Information Science - 971 Social Sciences

DOI: 10.1007/978-3-642-32054-5_161

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

15.

Accession number: 20133516679365

Title: Preparation of W-10Ti alloy with tungsten powder of different sizes and TiH₂ powder by liquid phase sintering

Authors: Yang, Xiaohong¹; Sun, Te¹; Xiao, Peng¹; Liang, Shuhua¹/杨晓红;孙特;肖鹏;梁淑华

Author affiliation: 1 Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liang, Shuhua (liangsh@xaut.edu.cn)

Source title: Xiyou Jinshu Cailiao Yu Gongcheng/Rare Metal Materials and Engineering

Abbreviated source title: Xiyou Jinshu Cailiao Yu Gongcheng

Volume: 42

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1492-1496

Language: Chinese

ISSN: 1002185X

CODEN: XJCGEA

Document type: Journal article (JA)

Publisher: Rare Metals Materials and Engineering Press, P.O. Box 51, Xi'an, 721014, China

Abstract: W-10Ti alloys were prepared with high purity 6 μm and 300 nm tungsten powder and TiH₂ powder as raw materials, which were mixed according to different graded proportions, compacted by the cold isostatic press, and sintered by the liquid sintering method. The density of W-10Ti alloys prepared with tungsten powder of different sizes was measured, and the microstructures and phase constituent of alloys were analyzed by XRD, SEM and TEM. The results show that the density of W-10Ti alloy prepared with all 6 μm tungsten powder and TiH₂ powder is only 85%, but W and Ti are distributed uniformly, and almost single phase solid solution is formed in the microstructure. The density of W-10Ti alloy prepared with all 300 nm tungsten powder and TiH₂ powder is up to 97%, but more Ti rich solid solution is formed. When W-10Ti alloys prepared with W powder of different sizes and TiH₂ powder, the single phase W-rich solid solution in microstructures is increased and the density of alloys are lowered with the decrease of the graded ratio of nanoscale to micronscale tungsten powder. When the graded ratio of nanoscale W to micronscale W is 1:2, the density of W-10Ti alloy is 95%, and more single phase W-rich solid solution is formed. Copyright © 2013 Northwest Institute for Nonferrous Metal Research. Published by Elsevier BV. All rights reserved.

Number of references: 15

Main heading: Titanium alloys

Controlled terms: Density (specific gravity) - Liquid phase sintering - Microstructure - Nanotechnology - Solid solutions

Uncontrolled terms: Cold isostatic press - Different sizes - Graded ratio - Liquid sintering - Micron scale - Phase constituent - Single phase - Tungsten powders

Classification code: 533 Ore Treatment and Metal Refining - 542.3 Titanium and Alloys - 761 Nanotechnology - 812 Ceramics, Refractories and Glass - 931.2 Physical Properties of Gases, Liquids and Solids - 933 Solid State Physics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

16.

Accession number: 20133616693604

Title: Random interpolation average for ecg signal denoising using multiple wavelet bases

Authors: Yang, Ying1 ; Wei, Yusen1/杨莺;韦育森

Author affiliation: 1 Department of Electronic Engineering, Xi An University of Technology, Xi An 710048, China

Corresponding author: Wei, Y. (wyshyy@gmail.com)

Source title: Biomedical Engineering - Applications, Basis and Communications

Abbreviated source title: Biomed. Eng. Appl. Basis Commun.

Volume: 25

Issue: 4

Issue date: August 2013

Publication year: 2013

Article number: 1350042

Language: English

ISSN: 10162372

CODEN: YIGOEO

Document type: Journal article (JA)

Publisher: World Scientific Publishing Co. Pte. Ltd, 5 Toh Tuck Link, Singapore, 596224, Singapore

Abstract: The random interpolation average (RIA) is a simple yet good denoising method. It firstly employed several times of random interpolations to a noisy signal, then applied the wavelet transform (WT) denoising to each interpolated signal and averaged all of the denoised signals to finish the denoising process. In this paper, multiple wavelet bases and the level-dependent threshold estimator were used in the RIA scheme so that it can be more suitable for the electrocardiogram (ECG) signal denoising. The synthetic ECG signal, real ECG signal and four types of noise were used to perform comparison experiments. The results show that the proposed method can provide the best signal to noise ratio (SNR) improvement in the denoising applications of the synthetic ECG signal and the real ECG signals. For the real ECG signals denoising, the average SNR improvement is 5.886 dB, while the result of the RIA scheme with single wavelet basis (RIAS), the fully translation-invariant [TI (fully)] and the WT denoising using hard thresholding [WT (hard)] are 5.577, 5.274 and 3.484 dB, respectively. © 2013 National Taiwan University.

Number of references: 23

Main heading: Signal denoising

Controlled terms: Electrocardiography - Interpolation - Signal to noise ratio - Wavelet analysis - Wavelet transforms

Uncontrolled terms: De-noised signals - Denoising methods - Electrocardiogram signal - Hard thresholding - Random interpolation average - SNR improvement - Translation invariants - Wavelet basis

Classification code: 701.1 Electricity: Basic Concepts and Phenomena - 716.1 Information Theory and Signal Processing - 921 Mathematics

DOI: 10.4015/S1016237213500427

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

17.

Accession number: 20133516678620

Title: Non-contact loading of high speed motorized spindle

Authors: Zhou, Xuntong¹ ; Liu, Hongzhao¹ ; Qiu, Ronghua¹ ; Liu, Lilan¹ ; Yuan, Daning¹;/刘宏昭;;刘丽兰;原大宁

Author affiliation: 1 School of Mechanical and Instrumental Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Liu, H. (liu-hongzhao@163.com)

Source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)/Journal of Central South University (Science and Technology)

Abbreviated source title: Zhongnan Daxue Xuebao (Ziran Kexue Ban)

Volume: 44

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 2756-2763

Language: Chinese

ISSN: 16727207

CODEN: ZDXZAC

Document type: Journal article (JA)

Publisher: Central South University of Technology, Hunan, Changsha, 410083, China

Abstract: To overcome the existing problems in the contact-loading, such as friction, vibration and noise, the method of loading by the electromagnet was put forward. Motorized spindle non-contact loading test platform was developed. The attractive force formula of the loading device was deduced. The loading force value was theoretically calculated by division of magnetic path and simulated by FEM. Loading forces in different input current of electromagnet were collected. Comparing theoretically calculated and simulated values with actual load collected by experiments, the correctness and feasibility of non-contact loading was verified. Data acquisition of loading forces in different speed of motorized spindle was carried out, and the forces and loading speed relation curve were deduced. The results show that the calculated values and simulation values are close to measured results, which indicates that the test platform is designed correctly. The test platform can accurately capture the efficiency loading force, temperature and so on.

Number of references: 15

Main heading: Loads (forces)

Controlled terms: Electromagnets - Finite element method

Uncontrolled terms: Attractive force - Calculated values - Electromagnetic forces -

Existing problems - High speed motorized spindle - Measured results - Motorized spindle - Non-contact

Classification code: 408 Structural Design - 421 Strength of Building Materials; Mechanical Properties - 704.1 Electric Components - 921.6 Numerical Methods

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130921 新增 8 条

1.

Accession number: 20133616698947

Title: The application of information visulization to english lexicology for college english majors

Authors: Cui, Xiao Qing1/

Author affiliation: 1 English Department, Xi'an University of Technology, 710054, Xi'an, Shaanxi, China

Corresponding author: Cui, X. Q. (xiaoqinglunwen@163.com)

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 347-350

Monograph title: Instruments, Measurement, Electronics and Information Engineering

Issue date: 2013

Publication year: 2013
Pages: 2785-2788
Language: English
ISSN: 16609336
E-ISSN: 16627482
Document type: Conference article (CA)
Conference name: 2013 International Conference on Precision Mechanical Instruments and Measurement Technology, ICPMIMT 2013
Conference date: May 25, 2013 - May 26, 2013
Conference location: Shenyang, Liaoning, China
Conference code: 99138
Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland
Abstract: By employing relative theories of information visualizaion and teaching methodology, we apply a practical course of College English majors to this information visulization assisted teaching, hoping to find that it is conducive to motivating English learners towards information acceptance and ultimately to improving their memory ability and classroom performance. © 2013 Trans Tech Publications Ltd, Switzerland.
Number of references: 9
Main heading: Teaching
Controlled terms: Applications - Information systems
Uncontrolled terms: Assisted teachings - College English - Information visualization - Information visulization - Teaching methodologies - Visualizaion
Classification code: 451.2 Air Pollution Control - 901.2 Education - 903.2 Information Dissemination
DOI: 10.4028/www.scientific.net/AMM.347-350.2785
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133716734946
Title: Influence of different anodes on cathodic protection for grounding grid
Authors: Deng, B.1 ; Feng, L.J.1 ; Yan, A.J.1, 2/;冯拉俊;闫爱军
Author affiliation: 1 School of Material Science and Engineering, Xi'an University of Technology, Xi'an 710048, China
2 Shaanxi Electric Power Research Institute, Xi'an 710054, China
Corresponding author: Deng, B. (christinemengmiao@163.com)
Source title: Materials Research Innovations
Abbreviated source title: Mater. Res. Innov.
Volume: 17
Issue: SUPPL. 1
Issue date: July 2013
Publication year: 2013
Pages: s126-s129
Language: English

ISSN: 14328917

E-ISSN: 1433075X

Document type: Conference article (CA)

Publisher: Maney Publishing, Suite 1C, Joseph's Well, Hanover Walk, Leeds, LS3 1AB, United Kingdom

Abstract: A flexible anode and three graphite anodes were used to study cathodic protection in simulated grounding grid in the laboratory. The protection potential values and uniformities of these anodes were investigated under the same condition through potential detection at each grid node. The results showed that with flexible anode, the protection potential was 0.3 V less than that with graphite anode, the potential dispersion degree of each node was 0.1 times that with graphite anode, and no special demands were needed for the cathodic access points under the same condition. The potential dispersion degree of each node in grounding grid was influenced significantly by the cathodic access points when graphite was used as deep-well anode. The rational choice for cathode access points and increasing the depth of deep-well anode could decrease the potential differences and dispersion degree of each node. The impressed potential for realising the same protection potential with graphite anode was higher than that with flexible anode. © W. S. Maney & Son Ltd. 2013.

Number of references: 15

Main heading: Electric grounding

Controlled terms: Anodes - Cathodic protection - Dispersions - Graphite

Uncontrolled terms: Access points - Dispersion degree - Graphite anode - Grid node - Grounding grids - Impressed-current cathodic protections - Potential difference - Protection potential

Classification code: 704 Electric Components and Equipment - 704.1 Electric Components - 706 Electric Transmission and Distribution - 804 Chemical Products Generally - 951 Materials Science

DOI: 10.1179/1432891713Z.000000000202

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133616702270

Title: Deriving reflectance and shading components from a single image

Authors: Fan, Caixia¹; Zhu, Hong¹; Lin, Guangfeng¹; Cao, Lei²/范彩霞;朱虹;蔺广逢;;

Author affiliation: 1 Xi'an University of Technology, Shaanxi, China

2 Xi'an University of Science and Technology, Shaanxi, China

Source title: Proceedings of the 2013 International Conference on Intelligent Control and Information Processing, ICICIP 2013

Abbreviated source title: Proc. Int. Conf. Intell. Control Inf. Process., ICICIP

Monograph title: Proceedings of the 2013 International Conference on Intelligent Control and Information Processing, ICICIP 2013

Issue date: 2013

Publication year: 2013

Pages: 139-143

Article number: 6568056

Language: English

ISBN-13: 9781467362481

Document type: Conference article (CA)

Conference name: 2013 4th International Conference on Intelligent Control and Information Processing, ICICIP 2013

Conference date: June 9, 2013 - June 11, 2013

Conference location: Beijing, China

Conference code: 98950

Sponsor: University of Illinois at Chicago; National Natural Science Foundation of China

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Interpreting real-world images require the ability distinguish the different characteristics of the scene. Reflectance images are invariant under different illumination conditions, they are more appropriate for some applications, such as object detection, object recognition. Shading images can be used for some research fields such as the analysis of scene illumination and color constancy. Reflectance and shading components of image are represented by intrinsic images. In this paper, for processing the images including the specular reflection and a variety of shadows, an algorithm is presented that uses multiple cues to recover reflectance and shading image from a single image. On the gradient domain of logarithmic image, firstly, a method based on c_{1c2} and o_{1o2} color space, called weighted edges map method, is used to design gradient classifier, executing intrinsic image preliminary decomposition. Then intensity characteristics and chromatic characteristics are used to compensate gradient classifier. Experimental results show that the recovering reflectance image by the proposed method can eliminate highlights and shadows effectively and keep more complete color and edge information.

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Number of references: 11

Main heading: Object recognition

Controlled terms: Bayesian networks - Color computer graphics - Data processing - Intelligent control - Reflection

Uncontrolled terms: Edge information - Illumination conditions - Intrinsic images - Object Detection - Real-world image - Reflectance and shadings - Reflectance images - Specular reflections

Classification code: 711 Electromagnetic Waves - 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 921.4

Combinatorial Mathematics, Includes Graph Theory, Set Theory

DOI: 10.1109/ICICIP.2013.6568056

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133616698736

Title: Development of embedded practice platform for control system based on ARM

Authors: Liu, Qing1 ; Wei, Jiang-Tao2/刘青;;

Author affiliation: 1 Engineering Training Center, Xi'an University of Technology, Xi'an, China

2 Xi'an Communication Institute, Xi'an, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 347-350

Monograph title: Instruments, Measurement, Electronics and Information Engineering

Issue date: 2013

Publication year: 2013

Pages: 1711-1715

Language: English

ISSN: 16609336

E-ISSN: 16627482

Document type: Conference article (CA)

Conference name: 2013 International Conference on Precision Mechanical Instruments and Measurement Technology, ICPMIMT 2013

Conference date: May 25, 2013 - May 26, 2013

Conference location: Shenyang, Liaoning, China

Conference code: 99138

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: This paper uses an industrial control product as a teaching platform, the necessary foundation of theoretical teaching and practical exercises which is combined, so that students quickly grasp the embedded industrial control system software and hardware, the basics of the system hardware and software analysis, circuit testing, and has strong ability to application. It can improve students on the practical aspects of the initiative and enthusiasm by courses. Improve the requirements of the course on the basis of the original experiment, the validation and repeated cross-experiment is deleted, which is contributed to save hours and improve efficiency. Due to the application of advanced processing technology, so it can reduce the distance of the school teaching and social applications. © 2013 Trans Tech Publications Ltd, Switzerland.

Number of references: 8

Main heading: Control systems

Controlled terms: Ability testing - Application programs - Embedded systems - Experiments - Hardware - Software testing

Uncontrolled terms: ARM - Circuit testing - Industrial control systems - Industrial controls - Practice platforms - Processing technologies - Social applications - Teaching platform

Classification code: 605 Small Tools and Hardware - 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 731.1 Control Systems - 901.3 Engineering Research - 912.4 Personnel

DOI: 10.4028/www.scientific.net/AMM.347-350.1711

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133616699143

Title: A kind of ECC - KNN classifier's vehicle identification algorithm

Authors: Lü, Lin-Tao¹ ; Gao, Huan² ; Yang, Yu-Xiang²/吕林涛;高欢;杨宇祥

Author affiliation: 1 College of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 College of Computer Science and Engineering, School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 347-350

Monograph title: Instruments, Measurement, Electronics and Information Engineering

Issue date: 2013

Publication year: 2013

Pages: 3724-3727

Language: English

ISSN: 16609336

E-ISSN: 16627482

Document type: Conference article (CA)

Conference name: 2013 International Conference on Precision Mechanical Instruments and Measurement Technology, ICPMIMT 2013

Conference date: May 25, 2013 - May 26, 2013

Conference location: Shenyang, Liaoning, China

Conference code: 99138

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: this article presents an improved classifier vehicle identification algorithm to improve the efficiency of the existing vehicle recognition algorithm. First, using edge orientation histograms to extract image characteristics, then, Error correction coding is applied to the classification of classifier, the multi-class classification problems turned into multiple binary classification problems. A large number of experimental analysis shows that the improved vehicle identification algorithm has good recognition performance and robustness. Therefore, the algorithm which this article used has high theoretical and practical value. © 2013 Trans Tech Publications Ltd, Switzerland.

Number of references: 8

Main heading: Algorithms

Controlled terms: Error correction - Graphic methods

Uncontrolled terms: Binary classification problems - Edge orientation histograms - Error correction coding - Experimental analysis - Image characteristics - K-nearest neighborhoods - Multiclass classification problems - Vehicle identification

Classification code: 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 723 Computer Software, Data Handling and Applications - 723.5 Computer Applications - 921 Mathematics

DOI: 10.4028/www.scientific.net/AMM.347-350.3724

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133616698931

Title: Feature selection algorithm for palm bio-impedance spectroscopy based on immune clone

Authors: Lü, Lin-Tao¹ ; Li, Peng² ; Yang, Yu-Xiang² ; Tan, Fang²/吕林涛;李鹏;杨宇祥;谭芳

Author affiliation: 1 College of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

2 College of Computer Science and Engineering, School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, China

Source title: Applied Mechanics and Materials

Abbreviated source title: Appl. Mech. Mater.

Volume: 347-350

Monograph title: Instruments, Measurement, Electronics and Information Engineering

Issue date: 2013

Publication year: 2013

Pages: 2712-2716

Language: English

ISSN: 16609336

E-ISSN: 16627482

Document type: Conference article (CA)

Conference name: 2013 International Conference on Precision Mechanical Instruments and Measurement Technology, ICPMIMT 2013

Conference date: May 25, 2013 - May 26, 2013

Conference location: Shenyang, Liaoning, China

Conference code: 99138

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: According to the features of Palm bio-impedance spectroscopy (BIS) data, this paper suggests a kind of effective feature model of palm BIS data- elliptical model. The model combines immune clone algorithm and least squares method, establishes a palm BIS feature selection algorithm, and uses the algorithm to obtain the optimal feature subset that can completely represent the palm BIS data, and then use several classification algorithms for classification and comparison. The experimental results show that accuracy of the feature subset obtained through the algorithm in SVM classification algorithm test can reach 93.2, thereby verifying the algorithm is a valid and reliable palm BIS feature selection algorithm. © 2013 Trans Tech Publications Ltd, Switzerland.

Number of references: 9

Main heading: Algorithms

Controlled terms: Cloning - Feature extraction - Least squares approximations - Pattern recognition - Spectroscopy

Uncontrolled terms: Bio-Impedance spectroscopies - Classification algorithm - Feature modeling - Feature selection algorithm - Immune clone algorithm - Least squares methods - Palm BIS - SVM classification

Classification code: 716 Telecommunication; Radar, Radio and Television - 723 Computer Software, Data Handling and Applications - 801 Chemistry - 801.2 Biochemistry - 921

Mathematics - 921.6 Numerical Methods
DOI: 10.4028/www.scientific.net/AMM.347-350.2712
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133616696638

Title: A novel extension to the polynomial basis functions describing Bezier curves and surfaces of degree n with multiple shape parameters

Authors: Qin, Xinqiang¹ ; Hu, Gang¹ ; Zhang, Nianjuan¹ ; Shen, Xiaoli¹ ; Yang, Yang¹/秦新强;张念娟;胡钢;;

Author affiliation: 1 Department of Applied Mathematics, Xi'an University of Technology, 710048 Xi'an, China

Corresponding author: Qin, X. (xqqin@xaut.edu.cn)

Source title: Applied Mathematics and Computation

Abbreviated source title: Appl. Math. Comput.

Volume: 223

Issue date: 2013

Publication year: 2013

Pages: 1-16

Language: English

ISSN: 00963003

CODEN: AMHCBQ

Document type: Journal article (JA)

Publisher: Elsevier Inc., 360 Park Avenue South, New York, NY 10010, United States

Abstract: The construction of Be'zier curves using shape control parameters is one of the most popular areas of research in computer aided geometric design (CAGD). A class of new polynomial basis functions with $n - 1$ local shape control parameters is presented here to allow the construction of Be'zier curves with n local shape control parameters, which is an extension to the classical Bernstein basis functions of degree n . The properties of the proposed basis functions and the corresponding piecewise polynomial curve with $n - 1$ local shape control parameters are analyzed. This analysis shows that the new class of polynomial functions meets the conditions required for both C_0 , C_1 and C_2 continuity as well as G_0 , G_1 and G_2 continuity. Some curve design applications are then discussed and an extended application for surface design is also presented. The modeling examples illustrate that the new extension provides not only a better approximation and mathematical description of Be'zier curves, but allows the shape parameters to be altered, making it a valuable method for the design of curves and surfaces. © 2013 Elsevier Inc. All rights reserved.

Number of references: 27

Main heading: Functions

Controlled terms: Computer aided design - Curve fitting - Polynomial approximation

Uncontrolled terms: Basis functions - Continuity conditions - Curve and surface - Extension - Shape parameters

Classification code: 723.5 Computer Applications - 921 Mathematics - 921.6 Numerical

Methods

DOI: 10.1016/j.amc.2013.07.073

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133716721827

Title: New multivariate hash function quadratic polynomials multiplying linear polynomials

Authors: Zou, Youjiao^{1, 2}; Ma, Wenping¹; Ran, Zhanjun²; Wang, Shangping²/邹又姣;;王尚平

Author affiliation: 1 State Key Laboratory of Integrated Service Networks, Xidian University, 710071 Xi'an, China

2 Department of Mathematics, Xi'an University of Technology, College of Science, 710048 Xi'an, China

Source title: IET Information Security

Abbreviated source title: IET Inf. Secur.

Volume: 7

Issue: 3

Issue date: 2013

Publication year: 2013

Pages: 181-188

Language: English

ISSN: 17518709

E-ISSN: 17518717

Document type: Journal article (JA)

Publisher: Institution of Engineering and Technology, Six Hills Way, Stevenage, SG1 2AY, United Kingdom

Abstract: In this study the authors propose a new multivariate hash function with HAsH Iterative FrAmework framework which we call the hash function quadratic polynomials multiplying linear polynomials (QML). The new hash function is made of cubic polynomials which are the products of quadratic polynomials and linear polynomials. The authors design the quadraticpolynomial part of the compression function based on the centre map of the multivariate public key cryptosystem Matsumoto-Imai cryptosystem (MI). The hash function QML can keep the three cryptography properties and be immune to the pre-image attack, second pre-image attack, collision attack, differential attack and algebraic attack. The required memory storage is about 50% of the one which is built of the cubic polynomials and their coefficients are random. On the avalanche effect, by experiments the authors get the result that about one half of the output bits are different when one input bit is changed randomly. The one-round diffusion of the hash function QML is twice of that of Blake. Also the authors simplify the matrixes of the new hash function, analyse the rationality and show the comparable data. Finally, the authors give the advice to the parameters of the new hash function and summarise the paper. © The Institution of Engineering and Technology 2013.

Number of references: 28

Main heading: Polynomials

Controlled terms: Digital storage - Hash functions - Public key cryptography

Uncontrolled terms: Avalanche effects - Compression functions - Cubic polynomials - Differential attacks - Iterative framework - Linear polynomials - Multivariate public key cryptosystem - Quadratic polynomial

Classification code: 921.1 Algebra - 921 Mathematics - 723 Computer Software, Data Handling and Applications - 722.1 Data Storage, Equipment and Techniques - 718

Telephone Systems and Related Technologies; Line Communications - 717 Optical

Communication - 716 Telecommunication; Radar, Radio and Television

DOI: 10.1049/iet-ifs.2012.0035

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20130928 新增 7 条

1.

Accession number: 20133816752050

Title: Special net structure and its application in workflow modeling

Authors: Gao, Xinqin¹; Wang, Xueping²/高新勤;王学平

Author affiliation: 1 School of Mechanical and Precision Instrument Engineering, Xi'an University of Technology, Xi'an, China

2 School of Economics and Finance, Xi'an Jiaotong University, Xi'an, China

Source title: International Journal of u- and e- Service, Science and Technology

Abbreviated source title: Int. J. u e Serv. Sci. Technol.

Volume: 6

Issue: 4

Issue date: 2013

Publication year: 2013

Pages: 127-138

Language: English

ISSN: 20054246

Document type: Journal article (JA)

Publisher: Science and Engineering Research Support Society, 20 Virginia Court, Sandy Bay, Tasmania, Australia

Abstract: On the basis of the traditional net structure, a new concept of special net structure (SNS) is defined and its main characteristics are summarized. The SNS is a concolorous graph with colorless nodes and concolorous edges, which can be described by polychromatic sets theory formally and stored by Hash table in computer programming to reduce the storage space and diminish the search region. Furthermore, the SNS is applied to workflow modeling, and the basic model primitives, typical model constructs and typical conflict constructs are presented. Finally, the verification algorithm of workflow SNS model is advanced. Together with a case of service process, a prototype system of workflow modeling based on SNS is developed to illustrate the correctness and feasibility of the proposed approach.

Number of references: 20

Main heading: Algorithms

Controlled terms: Computer programming
Uncontrolled terms: ITS applications - Net structures - Polychromatic set -
Polychromatic sets theory - Prototype system - Service process - Verification
algorithms - Workflow modeling
Classification code: 723 Computer Software, Data Handling and Applications - 723.1
Computer Programming - 921 Mathematics
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133816763430
Title: Research progress of space-time code in wireless optical communications (I)
Authors: Ke, Xizheng¹ ; Chen, Juan¹ ; Deng, Lijun¹/柯熙政;谌娟;邓莉君
Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of
Technology, Xi'an 710048, China
Corresponding author: Ke, X. (xzke@263.net)
Source title: Hongwai yu Jiguang Gongcheng/Infrared and Laser Engineering
Abbreviated source title: Hongwai yu Jiguang Gongcheng Infrared Laser Eng.
Volume: 42
Issue: 7
Issue date: July 2013
Publication year: 2013
Pages: 1882-1889
Language: Chinese
ISSN: 10072276
Document type: Journal article (JA)
Publisher: Chinese Society of Astronautics, P.O. Box 225-32, Tianjin, 300192, China
Abstract: MIMO technology has been intensively studied in RF communications, enable space
as a kind of resources that can be used in improving communication performance. There are lot
of differences between wireless optical communication and RF communication, such as
modulation/demodulation method and channel characteristics. The research progress of wireless
optical MIMO technology at domestic and abroad was reviewed, a detail analysis of the
background of the wireless optical MIMO was carried out. The effects of MIMO inhibits
atmospheric turbulence was illustrated by the experiment at last. The results show that the
wireless optical MIMO not only make the space as a kind of resources that can be improve the
capacity of wireless optical communication channel, but also inhibit atmospheric turbulence
effect, expanded field of wireless optical communication applications.
Number of references: 91
Main heading: Optical communication
Controlled terms: Atmospheric turbulence - Communication
Uncontrolled terms: Atmospheric turbulence effects - Channel characteristics -
Communication performance - Progress - RF communication - Space time coding -
Space-time codes - Wireless optical communication
Classification code: 443.1 Atmospheric Properties - 716 Telecommunication; Radar, Radio

and Television - 717.1 Optical Communication Systems

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133816763310

Title: Decentralized distribution update algorithm based on compressibility-controlled wireless sensor network

Authors: Li, Hehua¹ ; Wu, Chunling¹ ; Wei, Wei² ; Khoukhi, Buddha³;;魏巍;

Author affiliation: 1 Institute of Information Security Technology, Chongqing College of Electronic Engineering, Chongqing 401331, China

2 Xi'an University of technology, School of Computer Science and Engineering, Xi'an, China

3 School of Computer Science, Carleton University, 1125 Colonel By Drive, Ottawa, ON K1S 5B6, Canada

Source title: Journal of Networks

Abbreviated source title: J. Netw.

Volume: 8

Issue: 9

Issue date: 2013

Publication year: 2013

Pages: 2078-2084

Language: English

ISSN: 17962056

Document type: Journal article (JA)

Publisher: Academy Publisher, P.O.Box 40,, OULU, 90571, Finland

Abstract: Sensor network adopts the lossy compression techniques to collect long-term data, analyze the data tendency and the interested specific data model. In these applications, the sensor is established to collect large numbers of continuous data, and allow the access to the lossy and untimely data. In addition, the neighbor sensor data is correlated both in time and in space. Therefore, the data sensed by the sensor itself in the intermediate node and the data will be lossy compressed for prolonging the system operation lifetime. To study the optimal distributed problem of the bite-rate and the lossy degree. When the optimal distribution problem between the bit-rate and the lossy degree is discussed, how to make the optimal decision distributes the compressibility of all sensors in the satisfaction of the acceptable data distorted condition. For adopting the minimum transmittal bit-rate to collect the top-quality data. The optimal solution is introduced for the distribution problem, and the decentralized distribution algorithm is introduced in terms of the optimal solution. Compared with the average distribution strategy, the simulation result shows that the optimal solution and the decentralized actually can reduce large numbers of the network transmittal data volume. © 2013 ACADEMY PUBLISHER.

Number of references: 17

Main heading: Compressibility

Controlled terms: Algorithms - Optimal systems - Optimization - Wireless sensor networks

Uncontrolled terms: Decentralized distribution - Distributed compressibility configurations

- Distributed problems - Distribution problem - Distribution strategies - Optimal compressibility configuration - Optimal distributions - Slepian-Wolf coding
Classification code: 723 Computer Software, Data Handling and Applications - 732 Control Devices - 921 Mathematics - 921.5 Optimization Techniques - 951 Materials Science
DOI: 10.4304/jnw.8.9.2078-2084
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133716741528

Title: High power laser diode with non-absorbing windows fabricated by quantum well intermixing

Authors: Lin, T.1 ; Zhang, H.Q.1 ; Li, C.1 ; Ma, X.J.1 ; Lin, N.2 ; Zheng, K.2 ; Ma, X.Y.2/林涛,,,,,,,,;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, P.O. Box 710048, Xi'an, China

2 Institute of Semiconductors, Chinese Academy of Sciences, P.O. Box 100083, Beijing, China

Corresponding author: Lin, T. (lltLintao@163.com)

Source title: International Journal of Nanomanufacturing

Abbreviated source title: Int. J. Nanomanufacturing

Volume: 9

Issue: 3-4

Monograph title: Special Issue on New Energy Materials and Nanotechnology - Part I

Issue date: 2013

Publication year: 2013

Pages: 368-374

Language: English

ISSN: 17469392

E-ISSN: 17469406

Document type: Conference article (CA)

Publisher: Inderscience Enterprises Ltd., Editorial Office, P O Box 735, Olney, Bucks., MK46 5WB, MK46 5WB, United Kingdom

Abstract: Characterisation techniques based on quantum well intermixing have recently emerged as novel and exploratory methods for developing high power laser diodes. In this paper, we demonstrate the application of Zn impurities induced quantum well intermixing techniques to the non-absorbing windows fabrication for the AlGaInP/GaInP active region red-light laser diodes. The experimental results demonstrate that the photoluminescence characterisation had a blue shift of 23 nm for the diffusion parameters of 540°C and 20 minutes, and the maximum output power from the light-current tests of the thereafter fabricated non-absorbing windows laser diodes were improved by 47% than the conventional LDs. Copyright © 2013 Inderscience Enterprises Ltd.

Number of references: 7

Main heading: Semiconductor quantum wells

Controlled terms: Fabrication - High power lasers - Metallorganic chemical vapor deposition - Mixing - Organic chemicals - Semiconductor lasers

Uncontrolled terms: Active regions - Diffusion parameters - Maximum output power - Metal-organic chemical vapour depositions - Non-absorbing windows - Quantum well intermixing - QWI - Semi conducting III-V materials

Classification code: 913.4 Manufacturing - 804.1 Organic Compounds - 802.3 Chemical Operations - 802.2 Chemical Reactions - 744.4.1 Semiconductor Lasers - 744.1 Lasers, General - 714.2 Semiconductor Devices and Integrated Circuits

DOI: 10.1504/IJNM.2013.056063

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133716741511

Title: The application of double-layer silicon nitride films on the solar cell anti-reflection coatings

Authors: Ma, X.J.1 ; Lin, T.1 ; Chen, Q.B.1 ; Zhang, M.S.1/;林涛;;;

Author affiliation: 1 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an, Shaanxi, 710048, China

Corresponding author: Lin, T. (lltLintao@163.com)

Source title: International Journal of Nanomanufacturing

Abbreviated source title: Int. J. Nanomanufacturing

Volume: 9

Issue: 3-4

Monograph title: Special Issue on New Energy Materials and Nanotechnology - Part I

Issue date: 2013

Publication year: 2013

Pages: 221-228

Language: English

ISSN: 17469392

E-ISSN: 17469406

Document type: Conference article (CA)

Publisher: Inderscience Enterprises Ltd., Editorial Office, P O Box 735, Olney, Bucks., MK46 5WB, MK46 5WB, United Kingdom

Abstract: In this paper, reflectance features, external quantum efficiency, and energy conversion efficiency of mono-crystalline silicon solar cells with double-layer silicon nitride (SiNx) anti-reflection coatings were investigated. The simulated results by the PC1D software showed that the combination in which the bottom SiNx layer had a thickness of 35 nm and refractive index of 2.3, the upper layer had a thickness of 40 nm and refractive index of 1.9 achieved a minimum reflectance. Double-layer SiN x anti-reflection coatings were fabricated by adjusting the ratio of SiH4:NH3 in the PECVD growth. The measurement showed that the double-layer coatings had less reflectance than the single-layer coatings in short wavelength, while they did not show obvious changes in the range of 380 nm to 400 nm for the intensive absorption. Although the combination parameters were not optimum, the energy conversion efficiency of the double-layer SiN x anti-reflection coatings solar cell was improved from 17.88% to 18.03% comparing with the single-layer coatings. Copyright © 2013 Inderscience Enterprises Ltd.

Number of references: 7

Main heading: Silicon nitride

Controlled terms: Coatings - Conversion efficiency - Nanostructured materials - Plasma enhanced chemical vapor deposition - Reflection - Refractive index - Silicon solar cells

Uncontrolled terms: Crystal silicon - Double layers - External quantum efficiency - PC1D - Short wavelengths - Silicon Nitride Film - Simulated results - SiNx

Classification code: 932.3 Plasma Physics - 812.1 Ceramics - 761 Nanotechnology - 741.1 Light/Optics - 702.3 Solar Cells - 539 Metals Corrosion and Protection; Metal Plating - 525.5 Energy Conversion Issues

DOI: 10.1504/IJNM.2013.056046

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133816763205

Title: Detection and false-alarm probabilities based on Multi-Pixel Photon Counter

Authors: Zhang, Guoqing1 ; Liu, Lina2 ; Zhu, Changjun1/张国青;刘丽娜;朱长军

Author affiliation: 1 Department of Physics, School of Science, Xi'an Polytechnic University, Xi'an 710048, China

2 Department of Physics, School of Science, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Zhang, G. (zhangg_356@163.com)

Source title: Hongwai yu Jiguang Gongcheng/Infrared and Laser Engineering

Abbreviated source title: Hongwai yu Jiguang Gongcheng Infrared Laser Eng.

Volume: 42

Issue: 7

Issue date: July 2013

Publication year: 2013

Pages: 1819-1824

Language: Chinese

ISSN: 10072276

Document type: Journal article (JA)

Publisher: Chinese Society of Astronautics, P.O. Box 225-32, Tianjin, 300192, China

Abstract: In order to perfect the theoretical basis of Multi-Pixel Photon Counter (MPPC) serving as the detector of laser ranging or laser radar, the detection and false-alarm probability of MPPC were studied in this paper. The model of the detection and false-alarm probability based on MPPC was proposed and the analytical expressions were derived by using Poisson theory. The numerical analysis was also done. Some interesting characteristics were found which were not existed in conventional single point detectors. The numerical results show that the system requirements of laser ranging can be obtained just by adjusting the photoelectron equivalent threshold of MPPC, without the gating technology, if using MPPC as the detector. The sensitivity can reach the photon level and the photon number can be resolved. This model and results have certain significance in theory and to promote the application of MPPC in laser range and laser radar for high sensitivity and fast detection.

Number of references: 11

Main heading: Detectors

Controlled terms: Alarm systems - Laser theory - Optical radar - Photons - Pixels
- Probability

Uncontrolled terms: Analytical expressions - Detection probabilities - Fast detections -
High sensitivity - Laser ranging - Multi-pixel photon counters - Numerical results -
System requirements

Classification code: 716.2 Radar Systems and Equipment - 723.5 Computer Applications -
741.1 Light/Optics - 744.1 Lasers, General - 914 Safety Engineering - 922.1 Probability
Theory

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133716739744

Title: Research on the inter-link interference model in wireless ultraviolet non-line-of-sight
communication

Authors: Zhao, Taifei¹; Zhang, Aili¹; Jin, Dan¹; Guan, Yazhou¹/赵太飞;张爱利;金丹;管亚洲

Author affiliation: 1 Faculty of Automation and Information Engineering, Xi'an University of
Technology, Xi'an, Shaanxi 710048, China

Corresponding author: Zhao, T. (year623@163.com)

Source title: Guangxue Xuebao/Acta Optica Sinica

Abbreviated source title: Guangxue Xuebao

Volume: 33

Issue: 7

Issue date: July 2013

Publication year: 2013

Article number: 0706023

Language: Chinese

ISSN: 02532239

CODEN: GUXUDC

Document type: Journal article (JA)

Publisher: Chinese Optical Society, P.O. Box 80, Xi'an, 710068, China

Abstract: The characteristic of scattering and three kinds of inter-link interferences of wireless
ultraviolet non-line-of-sight (NLOS) communication are studied. The wireless ultraviolet NLOS
single scattering communication simulation model based on Monte Carlo method is established.
The correctness of the model is verified by the theoretical formula. Using this model the
non-coplanar inter-link interference in wireless ultraviolet communication is simulated. The
results show that adjusting the receiving elevation and field angle of the working link receiver
reasonably can reduce the inter-link interference and improve the performance of
communication system.

Number of references: 16

Main heading: Computer simulation

Controlled terms: Communication - Monte Carlo methods - Optical communication -
Scattering

Uncontrolled terms: Communication simulation - Field angle - Inter-link interference -

Non-coplanar - Non-line-of-sight - Single scattering - Theoretical formula - Ultraviolet
Classification code: 711 Electromagnetic Waves - 716 Telecommunication; Radar, Radio and Television - 717.1 Optical Communication Systems - 723.5 Computer Applications - 922.2 Mathematical Statistics
DOI: 10.3788/AOS201333.0706023
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

20131005 新增 9 条

1.

Accession number: 20133916777320

Title: Using power aggregation operators to fuse hesitant fuzzy information in multiple attribute decision making

Authors: Dong, Ming-Gao^{1, 2}; Shou-Yi, Li¹;李守义

Author affiliation: 1 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, 710048, China

2 School of Economics and Management, Xi'an Shiyou University, 710065, China

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2013 International Conference on Management Science and Engineering, ICMSE 2013 - 20th Annual Conference Proceedings

Issue date: 2013

Publication year: 2013

Pages: 335-341

Article number: 6586303

Language: English

ISSN: 21551847

ISBN-13: 9781479904716

Document type: Conference article (CA)

Conference name: 2013 20th International Conference on Management Science and Engineering, ICMSE 2013

Conference date: July 17, 2013 - July 19, 2013

Conference location: Harbin, China

Conference code: 99367

Sponsor: Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: Hesitant fuzzy set, as an extension of fuzzy set, is useful to depict fuzzy information with several possible values of membership of an element to a set in multiple attribute decision making. Motivated by the idea of power average operator, in this paper, several hesitant fuzzy

power aggregation operators are developed, and their properties are investigated. An accuracy function and a set of comparison rules are established for ranking hesitant fuzzy sets. Moreover, an approach to multiple-attribute decision-making with hesitant information is developed on the basis of the power aggregation operators and comparison rules. Finally, an application of them to multiple-attribute decision-making is given by an illustrative example. © 2013 IEEE.

Number of references: 14

Main heading: Decision making

Controlled terms: Fuzzy sets - Management science - Mathematical operators

Uncontrolled terms: Accuracy functions - Aggregation operator - Comparison rules - Fuzzy information - Fuzzy power - Hesitant fuzzy sets - Multiple attribute decision making - Power average operators

Classification code: 912.2 Management - 921 Mathematics

DOI: 10.1109/ICMSE.2013.6586303

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133916789772

Title: Experimental study of surface flashover field of Si-GaAs photoconductive semiconductor switch

Authors: Ji, Weili¹; Shi, Wei^{1, 2}/纪卫莉;李守义

Author affiliation: 1 Applied Physics Department, Xi'an University of Technology, Xi'an 710048, China

2 State Key Laboratory of Electrical Insulation and Power Equipment, Xi'an Jiaotong University, Xi'an 710049, China

Corresponding author: Ji, W. (jiweili@xaut.edu.cn)

Source title: Gaodianya Jishu/High Voltage Engineering

Abbreviated source title: Gaodianya Jishu

Volume: 39

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 1919-1924

Language: English

ISSN: 10036520

CODEN: GAJIE5

Document type: Journal article (JA)

Publisher: Science Press, 18, Shuangqing Street, Haidian, Beijing, 100085, China

Abstract: With its unique features, photoconductive semiconductor switch (PCSS) is generally recognized today as a promising power electronic device. However, a major limitation of PCSS is its surprisingly low voltage threshold of surface flashover (SF). In this paper, an experimental study of surface flashover of a back-triggered PCSS is presented. The PCSSs with electrode gap of 18 mm are fabricated from liquid encapsulated czochralski (LEC) semi-insulating gallium arsenide (SI-GaAs), and they are either un-coated, or partly coated, or entirely coated PCSSs with

high-strength transparent insulation. The SF fields of the PCSSs are measured and discussed. According to the experimental results, the high-dielectric-strength coating is efficient in both reducing the gas desorption from semiconductor and increasing the SF field: a well-designed PCSS can resist a voltage up to 20 kV under the repetition frequency of 30 Hz. The physical mechanism of the PCSS SF is analyzed, and the conclusion is made that having a channel structure, the SF is the breakdown of the contaminated dielectric layer at the semiconductor-ambient dielectric interface. The non-uniform distribution of the surface field and the gas desorption due to thermal effects of semiconductor surface currents are key factors causing the SF field reduction.

Number of references: 27

Main heading: Gallium arsenide

Controlled terms: Coatings - Desorption - Discharge (fluid mechanics) - Electric fields - Electric power systems - Photoconductive switches

Uncontrolled terms: Dielectric coatings - Liquid encapsulated czochralski - Non-uniform distribution - Photoconductive semiconductor switches - Power electronic devices - Semi-insulating gallium arsenide - Si-GaAs - Surface flashover

Classification code: 804 Chemical Products Generally - 802.3 Chemical Operations - 714.2 Semiconductor Devices and Integrated Circuits - 706.1 Electric Power Systems - 701.1 Electricity: Basic Concepts and Phenomena - 539 Metals Corrosion and Protection; Metal Plating - 407 Maritime and Port Structures; Rivers and Other Waterways

DOI: 10.3969/j.issn.1003-6520.2013.08.016

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133916786695

Title: Wear behaviors of Cf/Mg composites fabricated by extrusion directly following vacuum pressure infiltration technique

Authors: Qi, Lehua^{1, 2}; Guan, Juntao¹; Liu, Jian^{1, 3}; Zhou, Jiming^{1, 2}; Wei, Xinliang¹; 刘健^{1, 2, 3}

Author affiliation: 1 School of Mechatronic Engineering, Northwestern Polytechnical University, Xi'an 710072, China

2 Key Laboratory of Contemporary Design and Integrated Manufacturing Technology, Ministry of Education, Northwestern Polytechnical University, Xi'an 710072, China

3 Institute of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Qi, L. (qilehua@nwpu.edu.cn)

Source title: Wear

Abbreviated source title: Wear

Volume: 307

Issue: 1-2

Issue date: September 30, 2013

Publication year: 2013

Pages: 127-133

Language: English

ISSN: 00431648

CODEN: WEARAH

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: Cf/Mg composites were fabricated by extrusion directly following vacuum pressure infiltration technique (EVI). Fiber distribution and wear behaviors of the composites were investigated. For comparison, Cf/Mg composites were also fabricated by squeeze casting as references. Dry wear tests were carried out at room temperature under a normal load of 100N, at a sliding velocity of 0.47m/s for sliding distances up to 2000m. Worn surfaces were observed under SEM to understand wear mechanisms. The results indicated that wear rates of squeeze-casting composites were higher than those of as-extruded composites (fabricated by EVI). The main wear mechanisms of the squeeze-casting composite were delamination wear. Fiber orientation with respect to sliding direction had a remarkable influence on the wear rates. With fiber orientation paralleled to the sliding direction, the wear rate of composites was higher, compared with that when fiber orientation inclined to the sliding direction. Correspondingly, carbon fibers on the worn surface were pulled out and fractured, respectively. The main wear mechanisms of the as-extruded composites were abrasive wear and fiber fracture. In addition, partial delaminations were found on the worn surface, when fiber orientation was parallel to the sliding direction. With fiber orientation perpendicular to the sliding direction, the wear rate of composites was somewhat lower than that when fiber orientation was parallel to the sliding direction. © 2013 Elsevier B.V.

Number of references: 25

Main heading: Metallic matrix composites

Controlled terms: Delamination - Electron microscopy - Extrusion - Fabrication - Fibers - Lunar surface analysis - Metal testing - Squeeze casting - Surface analysis - Tribology - Vacuum - Wear of materials

Uncontrolled terms: Delamination wear - Fiber distribution - Room temperature - Sliding direction - Sliding distances - Sliding velocities - Sliding wear - Wear-testing

Classification code: 951 Materials Science - 933 Solid State Physics - 931 Classical Physics; Quantum Theory; Relativity - 913.4 Manufacturing - 817 Plastics and Other Polymers: Products and Applications - 812 Ceramics, Refractories and Glass - 801 Chemistry - 633 Vacuum Technology - 535.2.2 Metal Forming Practice - 534.2 Foundry Practice - 531 Metallurgy and Metallography - 423 Non Mechanical Properties and Tests of Building Materials - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1016/j.wear.2013.08.024

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133916789979

Title: Research on water bank operation mechanism based on the theory of economic behavior analysis

Authors: Wang, Guang-Yu1 ; Xie, Jian-Cang1 ; Zhang, Jian-Long2 ; Long, Zheng-Wei3/王光宇;解建仓;;;

Author affiliation: 1 Northwest Key Laboratory of Water Resource and Environment Ecology of Ministry of Education, Xi'an University of Technology, Xi'an 710048, China
2 Shanxi Province Water Conservancy Construction and Development Centers, Taiyuan 030002, China
3 Shaanxi Province Water Resources Management Office, Xi'an 710004, China
Corresponding author: Wang, G.-Y. (zjlong007@126.com)
Source title: Shuili Xuebao/Journal of Hydraulic Engineering
Abbreviated source title: Shuili Xuebao
Volume: 44
Issue: 8
Issue date: August 2013
Publication year: 2013
Pages: 994-1001
Language: Chinese
ISSN: 05599350
CODEN: SLHPBI
Document type: Journal article (JA)
Publisher: China Water Power Press, no. 1 Xikang Road, Nanjing, 210024, China
Abstract: Water bank is an effective tool to transfer water surplus and deficiency, save water transaction costs and protect the safety of water supply. Taking the Wanggedu reservoir as an example, this paper used a water bank economic behavior model to study water in prices, loan water price and program features in ten scenario simulations, and water price scenarios under different scenarios were studied. The results show that among the ten scenario simulations, the marginal water loan cost used to price for water loan market and the water storage cost pricing in accordance with the farmers wishes could achieve the aim that the more the water loaned, the higher the profits for the banks. Thus, it is an appropriate control program for all three of water storage, water loan and water banks, which can provide guidance for the healthy development of water markets and efficient allocation of water resources.
Number of references: 16
Main heading: Reservoirs (water)
Controlled terms: Banks (bodies of water) - Commerce - Computer simulation - Costs - Economic analysis - Water resources - Water supply
Uncontrolled terms: Behavior analysis - Control program - Efficient allocations - Operation mechanism - Provide guidances - Scenario simulations - Transaction cost - Water banks
Classification code: 911.2 Industrial Economics - 911 Cost and Value Engineering; Industrial Economics - 723.5 Computer Applications - 446.1 Water Supply Systems - 444.1 Surface Water - 444 Water Resources - 441.2 Reservoirs
Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20133916777589

Title: Anew assumption in generation mechanism of emergency plan under the perspective of

'scenario-task'

Authors: Yi, Yang¹ ; Lin, Li¹/;

Author affiliation: ¹ School of Economics and Management, Xi'an University of Technology, 710048, China

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2013 International Conference on Management Science and Engineering, ICMSE 2013 - 20th Annual Conference Proceedings

Issue date: 2013

Publication year: 2013

Pages: 2263-2270

Article number: 6586578

Language: English

ISSN: 21551847

ISBN-13: 9781479904716

Document type: Conference article (CA)

Conference name: 2013 20th International Conference on Management Science and Engineering, ICMSE 2013

Conference date: July 17, 2013 - July 19, 2013

Conference location: Harbin, China

Conference code: 99367

Sponsor: Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: This article puts forward an idea of generating emergency plan under the 'scenario-task' perspective and clarifies the main content and key technology roadmap of the research starting from problems existing in the domestic emergency plan. Based on the summary of typical emergencies evolution, by means of making the research on the classification and grading of emergency scenarios and the constitution of scenario elements, the network analytical model of emergency scenario evolution is hierarchically formed. This model is made up of incentive layer, rule layer and events chain layer. At the same time, with national strategic task, regional coordination tasks and basic respond set up in the vertical direction, prevention, monitoring, response and recovery in the horizontal direction, we establish an emergency task structural matrix facing up to different kinds of scenario. It is discussed about the matching relationship between different levels of tasks and dynamic effect on the scenario evolution by the task performance. Then we seek the interaction mechanism between scenario evolution and task changes by analyzing the variable transformation between scenario, scenario element and task. The basic logic of emergency plan generation is revealed and the critical path of its dynamically generation is proposed from the aspects of emergency plan structural system, scenario and case database, task responsibility of emergency organization, emergency practice and plan evaluation.

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Number of references: 26

Main heading: Formal logic

Controlled terms: Grading - Management science

Uncontrolled terms: Emergency plans - Generation mechanism - Interaction mechanisms - Regional coordination - scenario evolution - Structural matrix - Structural systems - Variable transformation

Classification code: 721.1 Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming Theory - 912.2 Management - 913.3 Quality Assurance and Control

DOI: 10.1109/ICMSE.2013.6586578

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20133916789824

Title: Development of 0Cr13Ni5Mo steel matching electrode used on fan impeller

Authors: Zhang, Min¹ ; Wu, Weigang¹ ; Chu, Qiaoling¹ ; Li, Jihong¹ ; Zhang, Haicun²/张敏;;褚巧玲;李继红;张海存

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

2 Xi'an Shaangu Power Co. Ltd., Xi'an 710075, China

Corresponding author: Zhang, M. (zhmmn@xaut.edu.cn)

Source title: Hanjie Xuebao/Transactions of the China Welding Institution

Abbreviated source title: Hanjie Xuebao

Volume: 34

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 1-4

Language: Chinese

ISSN: 0253360X

CODEN: HHPAD2

Document type: Journal article (JA)

Publisher: Harbin Research Institute of Welding, No. 111 He-Xing Lu, Harbin, China

Abstract: According to the requirements for mechanical property of fan impeller welded joints, cored wire was designed based on the principle of microstructure match. The component gap between the tested cored wire and designed cored wire was filled by alloying elements transition of the coating. An electrode special for 0Cr13Ni5Mo steel was developed after metallurgical analysis, mechanical and processing property testing. The results show that the method of filling the component gap between the tested cored wire and designed cored wire by alloying elements transition of the coating could verify whether the designed cored wire achieved the purpose and also guide the small batch production of special electrodes. The microstructure of the weld and heat-affected zone (HAZ) made with the No.1, No.2 and No.3 electrodes consisted of tempered sorbite, lath martensite, residual austenite and quadratic precipitated phase, and the mechanical properties of the resultant joints were better than those with the No.4 electrode. The No.2 electrode had the best processing property, and the No.3 electrode had the best comprehensive property which could be used as a special electrode for 0Cr13Ni5Mo steel.

Number of references: 7

Main heading: Steel metallurgy

Controlled terms: Alloying - Alloying elements - Coatings - Electrodes - Heat affected zone - Impellers - Martensite - Mechanical properties - Microstructure - Steel testing

Uncontrolled terms: Comprehensive properties - Lath martensite - Metallurgical analysis - Precipitated phase - Processing properties - Residual austenite - Small batch production - Tempered sorbite

Classification code: 951 Materials Science - 933 Solid State Physics - 704.1 Electric Components - 601.2 Machine Components - 539 Metals Corrosion and Protection; Metal Plating - 538.2 Welding - 531.2 Metallography - 531.1 Metallurgy - 421 Strength of Building Materials; Mechanical Properties

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20133916777370

Title: Research on the structure and measurement of supplier adaptive behaviors

Authors: Zhang, Yan-Tao¹; Li, Sui-Cheng¹; Bo, Li¹/张艳涛;李随成

Author affiliation: 1 School of Economics and Management, Xi'an University of Technology, 710054, China

Source title: International Conference on Management Science and Engineering - Annual Conference Proceedings

Abbreviated source title: Int. Conf. Manage. Sci. Eng. - Annu. Conf. Proc.

Monograph title: 2013 International Conference on Management Science and Engineering, ICMSE 2013 - 20th Annual Conference Proceedings

Issue date: 2013

Publication year: 2013

Pages: 691-696

Article number: 6586355

Language: English

ISSN: 21551847

ISBN-13: 9781479904716

Document type: Conference article (CA)

Conference name: 2013 20th International Conference on Management Science and Engineering, ICMSE 2013

Conference date: July 17, 2013 - July 19, 2013

Conference location: Harbin, China

Conference code: 99367

Sponsor: Harbin Institute of Technology

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: It is helpful to understand the interactions of manufacturer-supplier dyad by investigating the contents of supplier adaptive behaviors. The paper develops a measurement

scale of supplier adaptive behaviors in Chinese context based on referring to extant research results and carrying out interviews. Then, the paper explores the content dimensions of supplier adaptive behaviors, using the method of exploratory factor analysis, and test the reliability and validity of the scale. It is shown that the contents of supplier adaptive behaviors consist of five dimensions, namely production adaptive behaviors, delivery adaptive behaviors, technical adaptive behaviors, product adaptive behaviors and operation strategy adaptive behaviors. The scale has good reliability and validity. The results can be used as a practical foundation and guidance for researchers and enterprises in the future. © 2013 IEEE.

Number of references: 21

Main heading: Research

Controlled terms: Factor analysis - Management science

Uncontrolled terms: Adaptive behavior - Confirmatory factor analysis - content dimension - Exploratory factor analysis - Measurement scale - Operation strategy - Practical foundations - Reliability and validity

Classification code: 901.3 Engineering Research - 912.2 Management - 922.2

Mathematical Statistics

DOI: 10.1109/ICMSE.2013.6586355

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20133916780937

Title: Microstructure and abrasive wear characteristics of in situ vanadium carbide particulate-reinforced iron matrix composites

Authors: Zhong, Lisheng^{1, 2} ; Ye, Fangxia² ; Xu, Yunhua² ; Li, Jinshan^{1/;;;}

Author affiliation: 1 State Key Laboratory of Solidification Processing, Northwestern Polytechnical University, Xi'an 710068, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Xu, Y. (xuyunhua@xaut.edu.cn)

Source title: Materials and Design

Abbreviated source title: Mater. Des.

Volume: 54

Issue date: February 2014

Publication year: 2014

Pages: 564-569

Language: English

ISSN: 02613069

E-ISSN: 18734197

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: In this work, in situ synthesis with infiltration casting and subsequent heat treatment was applied to fabricate vanadium carbide (V8C7) particulate-reinforced iron matrix composites. The microstructure and wear-resistance of V8C7 particulate-reinforced iron matrix composites

with different volume fraction were studied using scanning electron microscopy, X-ray diffraction, and wear testing. The V8C7 particles were uniformly distributed in the matrix, and the size of the V8C7 reinforcement was 2-12 μ m. The relative wear resistance of the composites initially increases decreases with higher V8C7 volume fractions. The best wear resistance of the composites was 21.2 times higher than that of gray cast iron under a 20N load. This was achieved at 24% V8C7 volume fraction. Wear of the composites manifests as grooves, broken carbide particles, and re-embedment of wear debris. © 2013 Elsevier Ltd.

Number of references: 22

Main heading: Particle reinforced composites

Controlled terms: Carbides - Casting - Composite materials - Iron -

Microstructure - Reinforcement - Scanning electron microscopy - Vanadium -

Volume fraction - Wear of materials - Wear resistance - X ray diffraction

Uncontrolled terms: Abrasive wear characteristics - Carbide particles - Gray cast iron -

In-situ synthesis - Infiltration casting - Iron matrix composites - Relative wear resistance - Vanadium carbides

Classification code: 951 Materials Science - 931.3 Atomic and Molecular Physics - 812.1

Ceramics - 741.1 Light/Optics - 641.1 Thermodynamics - 545.1 Iron - 543.6

Vanadium and Alloys - 534.2 Foundry Practice - 421 Strength of Building Materials;

Mechanical Properties

DOI: 10.1016/j.matdes.2013.08.097

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20133916784331

Title: A family of five-weight cyclic codes and their weight enumerators

Authors: Zhou, Zhengchun^{1, 2} ; Ding, Cunsheng³ ; Luo, Jinquan⁴ ; Zhang, Aixian^{5/;;;}

Author affiliation: 1 School of Mathematics, Southwest Jiaotong University, Chengdu, 610031, China

2 State Key Laboratory of Integrated Services Networks, Xidian University, Xi'an 710071, China

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4 Department of Informatics, University of Bergen, N-5020 Bergen, Norway

5 Department of Mathematical, Xi'An University of Technology, Xi'an, 710048, China

Source title: IEEE Transactions on Information Theory

Abbreviated source title: IEEE Trans. Inf. Theory

Volume: 59

Issue: 10

Issue date: 2013

Publication year: 2013

Pages: 6674-6682

Article number: 6529207

Language: English

ISSN: 00189448

CODEN: IETTAW

Document type: Journal article (JA)

Publisher: Institute of Electrical and Electronics Engineers Inc., 445 Hoes Lane / P.O. Box 1331, Piscataway, NJ 08855-1331, United States

Abstract: Cyclic codes are a subclass of linear codes and have applications in consumer electronics, data storage systems, and communication systems as they have efficient encoding and decoding algorithms. In this paper, a family of p -ary cyclic codes whose duals have three pairwise nonconjugate zeros is proposed. The weight distribution of this family of cyclic codes is determined. It turns out that the proposed cyclic codes have five nonzero weights. © 1963-2012 IEEE.

Number of references: 25

Main heading: Binary codes

Controlled terms: Consumer electronics - Data storage equipment - Number theory

Uncontrolled terms: Cyclic code - Exponential sums - Quadratic form - Weight distributions - Weight enumerator

Classification code: 715 Electronic Equipment, General Purpose and Industrial - 722.1 Data Storage, Equipment and Techniques - 723.1 Computer Programming - 913 Production Planning and Control; Manufacturing - 921 Mathematics

DOI: 10.1109/TIT.2013.2267722

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20131012 新增 14 条

1.

Accession number: 20134016808347

Title: Analyzing head and eye movement system with CORBA

Authors: Changyuan, Wang¹ ; Jing, Zhang¹ ; YuLong, Chen¹/王长元;张璟;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Changyuan, W. (cyw901@163.com)

Source title: Telkomnika

Abbreviated source title: Telkomnika

Volume: 11

Issue: 11

Issue date: 2013

Publication year: 2013

Pages: 6618-6623

Language: English

ISSN: 23024046

E-ISSN: 2087278X

Document type: Journal article (JA)

Publisher: Universitas Ahmad Dahlan, Jalan Kapas 9, Semaki, Umbul Harjo,, Yogiakarta, 55165,

Indonesia

Abstract: In order to study the vestibular system in different organs of movement as well as their collaboration between working mechanism, this paper designs a model of the common object request broker architecture (CORBA) for the head and eye movement system based on the vestibular function. By analyzing physiological characteristics of the head and eye movement model, and further introducing the structure features of CORBA. It focuses on the component composition and the model design of CORBA components library. According to the physiology work model of head and eye movement, the CORBA model of head and eye movement is established. As well as the structure of the model is designed in real application of head and eye movement measurement system. This paper provides a new way to research the head and eye movement system through using mathematical modeling and application structure which is based on vestibular function. © 2013 Universitas Ahmad Dahlan.

Number of references: 14

Main heading: Eye movements

Controlled terms: Common object request broker architecture (CORBA) - Functions - Physiology - Software architecture

Uncontrolled terms: Application structure - Component composition - Eye movement measurement - Eye movement model - Physiological characteristics - Structure features - Vestibular system - Working mechanisms

Classification code: 461.1 Biomedical Engineering - 461.9 Biology - 723.1 Computer Programming - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

2.

Accession number: 20133916791250

Title: Flexible organic solar cells based on spin-coated blend films of a phenylene-thiophene oligomer derivative and PCBM

Authors: Duan, Zongfan^{1, 2} ; Fujii, Shunjiro^{3, 4} ; Liu, Zheng¹ ; Okukawa, Takanori² ; Yoshida, Akira² ; Yanagi, Yuichiro² ; Kataura, Hiromichi^{3, 4} ; Zhao, Gaoyang¹ ; Nishioka, Yasushiro²/段宗范

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2 Department of Precision Machinery Engineering, College of Science and Technology, Nihon University, 7-24-1 Narashinodai, Funabashi-shi, Chiba 274-8501, Japan

3 Nanosystem Research Institute, National Institute of Advanced Industrial Science and Technology (AIST), Higashi, Tsukuba, Ibaraki, Japan

4 CREST, JST, Kawaguchi, Saitama, Japan

Corresponding author: Nishioka, Y. (nishioka@eme.cst.nihon-u.ac.jp)

Source title: Molecular Crystals and Liquid Crystals

Abbreviated source title: Mol. Cryst. Liq. Cryst.

Volume: 578

Issue: 1

Issue date: 2013

Publication year: 2013

Pages: 78-87

Language: English

ISSN: 15421406

E-ISSN: 15635287

CODEN: MCLCD8

Document type: Conference article (CA)

Publisher: Taylor and Francis Inc., 325 Chestnut St, Suite 800, Philadelphia, PA 19106, United States

Abstract: Flexible organic solar cells were fabricated on a polyethylene terephthalate (PET) substrate using a phenylene-thiophene oligomer, 3,7-bis[5-(4-n-hexylphenyl)-2-thienyl]dibenzothiophene-5,5-dioxide (37HPTDBTSD), as a photoactive donor. In bulk-heterojunction (BHJ) solar cells, many factors such as blend weight ratio, and solution and substrate temperatures have great effects on the photovoltaic performances. The flexible solar cell fabricated from the blend solution with a weight ratio of 1:2 of 37HPTDBTSD to phenyl-C61-butyric acid methyl ester (PCBM) and a temperature of 50°C, exhibited a high open-circuit voltage of 0.74 V and the highest power conversion efficiency of 0.26%. Copyright © Taylor & Francis Group, LLC.

Number of references: 20

Main heading: Solar cells

Controlled terms: Flexible electronics - Heterojunctions - Oligomers - Open circuit voltage - Photovoltaic effects - Semiconducting organic compounds - Thiophene

Uncontrolled terms: Bulk-heterojunction (BHJ) - Flexible - Flexible organic solar cells - Flexible solar cells - Photovoltaic performance - Polyethylene terephthalates (PET) - Power conversion efficiencies - Substrate temperature

Classification code: 804.1 Organic Compounds - 804 Chemical Products Generally - 715 Electronic Equipment, General Purpose and Industrial - 712.1.2 Compound Semiconducting Materials - 712.1 Semiconducting Materials - 701.1 Electricity: Basic Concepts and Phenomena - 615.2 Solar Power

DOI: 10.1080/15421406.2013.804384

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20133916790399

Title: Computational analysis for steel-plate shear wall based on the node connection characteristics

Authors: Guo, Hong-Chao¹ ; Hao, Ji-Ping² ; Pan, Xiu-Zhen¹ ; Liu, Jian-Yi³;;郝继平;;;

Author affiliation: 1 Department of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

2 Department of Civil Engineering, Xi'an University of Architecture and Technology, Xi'an 710055, China

3 NORENDAR International, Shijiazhuang 050011, China

Corresponding author: Guo, H.-C. (ghc-1209@163.com)

Source title: Gongcheng Lixue/Engineering Mechanics

Abbreviated source title: Gongcheng Lixue

Volume: 30

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Publication year: 2013

Pages: 193-198

Language: Chinese

ISSN: 10004750

CODEN: GOLIEB

Document type: Journal article (JA)

Publisher: Tsinghua University, Tsinghua University Xueyan Plaza, 100084, China

Abstract: Based on the study of a new semi-rigid composite frame with a steel-plate shear wall system, the structural bearing capacity of different wall forms, the stress and deformation development history are analyzed using ANSYS program, and the effects on the bearing capacity of a hinged connection, a rigid connection and a semi-rigid connection are compared. The results show that the yield limitation of the frame is increased about 20%, and the ultimate bearing capacity is increased about 10% after setting stiffeners. For a bending-frame steel-plate shear-wall structure, the beam and the column are combined through the rigid connection with wall to form a double lateral force resisting system, and the ultimate bearing capacity of a rigid node is increased about 15% than that of a hinged one. There is about 5% difference for the ultimate bearing capacity between a semi rigid node and a hinged one, which is only a single lateral force resisting system. The research provides a basis for the new structural system and its theoretical analysis.

Number of references: 10

Main heading: Plates (structural components)

Controlled terms: Bearing capacity - Numerical analysis - Shear walls

Uncontrolled terms: Computational analysis - Lateral force resisting system - Semirigid connections - Skeleton curves - Spring element - Steel plate shear walls - Stress and deformation - Ultimate bearing capacity

Classification code: 402 Buildings and Towers - 408.2 Structural Members and Shapes - 421 Strength of Building Materials; Mechanical Properties - 921.6 Numerical Methods

DOI: 10.6052/j.issn.1000-4750.2012.04.0290

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

4.

Accession number: 20133916792378

Title: Large-size data tasks scheduling algorithm of urban rail transit line network in the cloud

Authors: Han, Quanye^{1, 2}; Wang, Xiaoming²; Dang, Jianwu²; Hei, Xinhong³;黑新宏

Author affiliation: 1 Department of Computing Informatics, Shaanxi Radio and TV University, No. 32, Hangguang Road, Xi'an 710119, China

2 School of Electronics and Information Engineering, Lanzhou Jiaotong University, No. 88, West Anning Road, Lanzhou 730070, China

3 School of Computer Science and Engineering, Xi'an University of Technology, No. 5, South Jinhua Road, Xi'an 710048, China

Source title: ICIC Express Letters

Abbreviated source title: ICIC Express Lett.

Volume: 7

Issue: 10

Issue date: 2013

Publication year: 2013

Pages: 2707-2713

Language: English

ISSN: 1881803X

Document type: Journal article (JA)

Publisher: ICIC Express Letters Office, Tokai University, Kumamoto Campus, 9-1-1, Toroku, Kumamoto, 862-8652, Japan

Abstract: With the rapid development of digitalized urban rail transit, the historical data increase rapidly in urban rail transit line network, which leads to more and more large-size tasks of data processing. Thus, it is necessary to process large-size data tasks in a cloud environment due to insufficient capability of local data center. In order to minimize the scheduling length and reduce resource rent cost, a large-size data processing task scheduling of urban rail transit line network is modeled in the cloud, and a new scheduling algorithm based on particle swarm optimization is proposed in this paper. In the algorithm, a fitness function is designed by using scheduling length and resource rent cost. We also endow the particle position, velocity and operations with reality meaning to fit the characteristic of line network. Experimental results show that the proposed algorithm can not only decrease the scheduling length, but also reduce the resource rent cost. © 2013 ICIC International.

Number of references: 9

Main heading: Data processing

Controlled terms: Algorithms - Cost reduction - Light rail transit - Particle swarm optimization (PSO) - Scheduling

Uncontrolled terms: Cloud environments - Fitness functions - Historical data - Large-size data tasks - Line network - Particle position - Task-scheduling - Urban rail transit

Classification code: 682 Railroad Rolling Stock - 723 Computer Software, Data Handling and Applications - 723.2 Data Processing and Image Processing - 912.2 Management - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

5.

Accession number: 20134016808340

Title: A resource scheduling strategy in cloud computing based on multi-agent genetic algorithm

Authors: Jiang, Wuxue^{1, 2}; Zhang, Jing¹; Li, Junhuai¹; Hu, Hui³; 张璟; 李军怀;;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

2 Department of Computer Engineering, Dongguan Polytechnic, Dongguan 523808, Guangdong,

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3 Department of Science and Research, Huizhou Univeresity, Huizhou 516007, Guangdong, China

Corresponding author: Zhang, J. (zhangjing@xaut.edu.cn)

Source title: Telkomnika

Abbreviated source title: Telkomnika

Volume: 11

Issue: 11

Issue date: 2013

Publication year: 2013

Pages: 6563-6569

Language: English

ISSN: 23024046

E-ISSN: 2087278X

Document type: Journal article (JA)

Publisher: Universitas Ahmad Dahlan, Jalan Kapas 9, Semaki, Umbul Harjo,, Yogiakarta, 55165, Indonesia

Abstract: Resource scheduling strategies in cloud computing are used either to improve system operating efficiency, or to improve user satisfaction. This paper presents an integrated scheduling strategy considering both resources credibility and user satisfaction. It takes user satisfaction as objective function and resources credibility as a part of the user satisfaction, and realizes optimal scheduling by using genetic algorithm. We integrate this scheduling strategy into Agent subsequently and propose cloud computing system architecture based on Multi-agent. The numerical results show that this scheduling strategy improves not only the system operating efficiency, but also the user satisfaction. © 2013 Universitas Ahmad Dahlan.

Number of references: 10

Main heading: Scheduling

Controlled terms: Cloud computing - Computer systems - Customer satisfaction - Genetic algorithms - Multi agent systems

Uncontrolled terms: Integrated scheduling - Multiagent - Objective functions - Operating efficiency - Resource-scheduling - Resources credibility - Resources scheduling - Scheduling strategies

Classification code: 921 Mathematics - 912.2 Management - 912 Industrial Engineering and Management - 723.5 Computer Applications - 723 Computer Software, Data Handling and Applications - 722.4 Digital Computers and Systems - 722 Computer Systems and Equipment

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

6.

Accession number: 20134016810336

Title: An improved resource query and location algorithm based on cloud computing

Authors: Jiang, Wuxue^{1, 2}; Zhang, Jing¹; Li, Junhuai¹; Hu, Hui³;张璟;李军怀;;

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of

Technology, Xi'an 710048, Shaanxi, China

2 Department of Computer Engineering, Dongguan Polytechnic, Dongguan 523808, Guangdong, China

3 Department of Science and Research, Huizhou University, Huizhou 516007, Guangdong, China

Corresponding author: Jiang, W. (jiangwuxue_1@163.com)

Source title: Telkomnika

Abbreviated source title: Telkomnika

Volume: 11

Issue: 10

Issue date: 2013

Publication year: 2013

Pages: 6166-6172

Language: English

ISSN: 23024046

E-ISSN: 2087278X

Document type: Journal article (JA)

Publisher: Universitas Ahmad Dahlan, Jalan Kapas 9, Semaki, Umbul Harjo,, Yogiakarta, 55165, Indonesia

Abstract: With the continuous development of cloud computing applications, the problems of cloud computing are more and more obvious, such as the lower efficiency of resource search, the lack of network scalability, and some difficulties in management. In this paper, the problems of P2P network and the structural characteristics of the IS-P2P network are studied. On the basis of traditional Chord algorithm, the improvement of the speed of search is made. BiChord: a resource locator and query algorithm based on cloud computing is put forward. The bidirectional routing tables FingerTable and RefingerTable are designed by this algorithm, which adopts the query strategy of bidirectional location of keywords. In addition, the paper also proposes XP query: a message query mechanism based on the structure of the cloud computing. Simulation results show that BiChord has better routing performance than traditional Chord algorithm and the message query mechanism also improves the efficiency of resource queries. © 2013 Universitas Ahmad Dahlan.

Number of references: 12

Main heading: Cloud computing

Controlled terms: Algorithms - Location - Peer to peer networks

Uncontrolled terms: Computing applications - Continuous development - Location algorithms - Network scalability - Resource location - Routing performance - Structural characteristics - XP query

Classification code: 722 Computer Systems and Equipment - 722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications - 911 Cost and Value Engineering; Industrial Economics - 912 Industrial Engineering and Management - 921 Mathematics

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

7.

Accession number: 20134016808321

Title: A multi-agent supply chain information coordination mode based on cloud computing

Authors: Jiang, Wuxue^{1, 2}; Zhang, Jing¹; Li, Junhui¹; 张璟; 李军怀

Author affiliation: 1 School of Computer Science and Engineering, Xi'an University of Technology, Xi'an 710048, Shaanxi, China

2 Department of Computer Engineering, Dongguan Polytechnic, Dongguan 523808, Guangdong, China

Corresponding author: Jiang, W. (jiangwuxue_1@163.com)

Source title: Telkomnika

Abbreviated source title: Telkomnika

Volume: 11

Issue: 11

Issue date: 2013

Publication year: 2013

Pages: 6427-6433

Language: English

ISSN: 23024046

E-ISSN: 2087278X

Document type: Journal article (JA)

Publisher: Universitas Ahmad Dahlan, Jalan Kapas 9, Semaki, Umbul Harjo,, Yogiakarta, 55165, Indonesia

Abstract: In order to improve the high efficiency and security of supply chain information coordination under cloud computing environment, this paper proposes a supply chain information coordination mode based on cloud computing. This mode has two basic statuses which are online status and offline status. At the online status, cloud computing center is responsible for coordinating the whole supply chain information. At the offline status, information exchange can be realized among different nodes by using the pre-backup supply chain information and network address of other nodes. This coordination mode coordinates the whole supply chain information through the cloud computing center at the online status and maximizes the overall benefit. Meanwhile, the offline status effectively avoids the risks to the whole supply chain brought by the overdependence of cloud computing on network and the high information concentration. The two statuses have good customers' satisfaction and higher order finished rate in supply chain. The simulation experiment based on multi-Agent verifies the effectiveness of this mode in this paper. © 2013 Universitas Ahmad Dahlan.

Number of references: 10

Main heading: Supply chains

Controlled terms: Cloud computing - Computer systems - Customer satisfaction

Uncontrolled terms: Cloud computing environments - Computing center - Coordination modes - Customers' satisfaction - Information coordination - Information exchanges - Risk avoidance - Security of supply

Classification code: 722 Computer Systems and Equipment - 722.4 Digital Computers and Systems - 723 Computer Software, Data Handling and Applications - 912 Industrial Engineering and Management

Database: Compendex
Compilation and indexing terms, © 2013 Elsevier Inc.

8.

Accession number: 20134016796238

Title: Investigation of trapped thickness-twist waves induced by functionally graded piezoelectric material in an inhomogeneous plate

Authors: Li, Peng¹ ; Jin, Feng¹ ; Cao, Xiao-Shan²/李鹏;金峰;曹小杉

Author affiliation: 1 State Key Laboratory for Strength and Vibration of Mechanical Structures, School of Aerospace, Xi'an Jiaotong University, Xi'an 710049, China

2 Department of Engineering Mechanics, School of Civil Engineering and Architecture, Xi'an University of Technology, Xi'an 710048, China

Source title: Smart Materials and Structures

Abbreviated source title: Smart Mater Struct

Volume: 22

Issue: 9

Issue date: September 2013

Publication year: 2013

Article number: 095021

Language: English

ISSN: 09641726

E-ISSN: 1361665X

CODEN: SMSTER

Document type: Journal article (JA)

Publisher: Institute of Physics Publishing, Temple Circus, Temple Way, Bristol, BS1 6BE, United Kingdom

Abstract: The effect of functional graded piezoelectric materials on the propagation of thickness-twist waves is investigated through equations of the linear theory of piezoelectricity. The elastic and piezoelectric coefficients, dielectric permittivity, and mass density are assumed to change in a linear form but with different graded parameters along the wave propagation direction. We employ the power-series technique to solve the governing differential equations with variable coefficients attributed to the different graded parameters and prove the correction and convergence of this method. As a special case, the functional graded middle layer resulting from piezoelectric damage and material bonding is investigated. Piezoelectric damaged material can facilitate energy trapping, which is impossible in perfect materials. The increase in the damaged length and the reduction in the piezoelectric coefficient decrease the resonance frequency but increase the number of modes. Higher modes of thickness-twist waves appear periodically along the damaged length. Moreover, the displacement of the center of the damaged portion is neither symmetric nor anti-symmetric, unlike the non-graded plate. The conclusions are theoretically and practically significant for wave devices. © 2013 IOP Publishing Ltd.

Number of references: 38

Main heading: Piezoelectricity

Controlled terms: Crystallography - Differential equations - Permittivity - Wave

propagation

Uncontrolled terms: Dielectric permittivities - Functionally graded piezoelectric material - Governing differential equations - Inhomogeneous plate - Piezoelectric coefficient - Resonance frequencies - Variable coefficients - Wave propagation direction

Classification code: 701 Electricity and Magnetism - 701.1 Electricity: Basic Concepts and Phenomena - 711 Electromagnetic Waves - 921.2 Calculus - 933.1 Crystalline Solids

DOI: 10.1088/0964-1726/22/9/095021

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

9.

Accession number: 20133916790283

Title: Fast S transform-based classification of power quality disturbance

Authors: Man, Weishi¹ ; Zhang, Zhiyu¹ ; Kang, Qing² ; Miao, Yongkang¹ ; Xi, Xiaoli¹;; 张志禹;; 席晓莉

Author affiliation: 1 School of Automation and Information, Xi'an University of Technology, Xi'an 710048, China

2 Logistical Engineering University, Chongqing 401311, China

Corresponding author: Man, W.

Source title: Hsi-An Chiao Tung Ta Hsueh/Journal of Xi'an Jiaotong University

Abbreviated source title: Hsi An Chiao Tung Ta Hsueh

Volume: 47

Issue: 8

Issue date: August 2013

Publication year: 2013

Pages: 133-140

Language: Chinese

ISSN: 0253987X

CODEN: HCTPDW

Document type: Journal article (JA)

Publisher: Xi'an Jiaotong University, West Xian Ning Road 28, Xi'an, 710049, China

Abstract: Focusing on higher computation cost and lack of real-time detection for all techniques based on traditional S-transform to identify power quality disturbances, a real-time approach combining fast S-transform with least squares support vector machine is proposed. The standard deviation of module coefficients, maximum module coefficient of each frequency band, and module coefficient corresponding to the rated frequency are extracted from the one-dimensional vector of the fast S-transform of the original power quality signals as features, and the least squares support vector machine based on optimized parameters and the minimum output coding is used to classify and identify the voltage swell, voltage sag, voltage interruption, spike, transient oscillation and harmonic waves. Compared with the traditional approach based on S-transform, the proposed approach reduces the tasks in both extracting features and training of the support vector machine classifier due to fewer training samples. The longer the duration of the voltage disturbance signal, the higher the saving efficiency. To the same accuracy, for the disturbance signal with a length of 1024 points, processing time can be saved by 99%. The classification

accuracy of this approach gets up to 98% with higher anti-interference ability.

Number of references: 20

Main heading: Support vector machines

Controlled terms: Frequency bands - Power quality

Uncontrolled terms: Classification accuracy - Fast s transforms - Least squares support vector machines - Power quality disturbances - Real-time - Support vector machine classifiers - Traditional approaches - Transient oscillations

Classification code: 706.1.2 Electric Power Distribution - 716.4 Television Systems and Equipment - 723 Computer Software, Data Handling and Applications

DOI: 10.7652/xjtuxb201308023

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

10.

Accession number: 20134016797591

Title: Numerical simulation of fountain solution transfer mechanism on dampening fountain roller surface

Authors: Qin, Zhang¹ ; Guanghui, Cao² ; Hongwei, Xu³;;徐宏伟

Author affiliation: 1 School of Material Engineering, Nanjing Institute of Technology, Nanjing 211167 Jiangsu, China

2 Nanjing Minting Co.Ltd, Nanjing 211100, Jiangsu, China

3 School of Printing and Packaging Engineering, Xi'an University of Technology, Xi'an 710048, Shanxi, China

Corresponding author: Hongwei, X.

Source title: International Journal of Applied Mathematics and Statistics

Abbreviated source title: Int. J. Appl. Math. Stat.

Volume: 45

Issue: 15

Issue date: 2013

Publication year: 2013

Pages: 357-366

Language: English

ISSN: 09731377

E-ISSN: 09737545

Document type: Journal article (JA)

Publisher: CESER Publications, Post Box No. 113, Roorkee, 247667, India

Abstract: To achieve high offset printing quality, the film thickness of fountain solution transferred to dampening fountain roller must be precisely controlled. Dampening fountain roller analysis model is established. Mass continuity and N-S equations are used as the governing equation to model the situation. Flow simulation of fountain solution transfer process in offset printing is investigated by using commercial software FLUENT. The interface between air and liquid is captured by the volume of fraction (VOF) model. The study demonstrates that film thickness of fountain solution transferred is affected by rotational velocity, surface roughness and immersion depth of dampening fountain roller and by viscosity and surface tension of fountain

solution. The simulation results can provide some guidance to practical offset printing work. © 2013 by CESER Publications.

Number of references: 10

Main heading: Fountains

Controlled terms: Film thickness - Flow simulation - Navier Stokes equations - Offset printing - Phase interfaces - Quality control - Rollers (machine components) - Surface roughness

Uncontrolled terms: Analysis models - Commercial software - Fountain solutions - Governing equations - Printing quality - Rotational velocity - Transfer mechanisms - Transfer process

Classification code: 943 Mechanical and Miscellaneous Measuring Instruments - 931.2

Physical Properties of Gases, Liquids and Solids - 931.1 Mechanics - 913.3 Quality

Assurance and Control - 745.1 Printing - 723.5 Computer Applications - 601.2 Machine

Components - 423 Non Mechanical Properties and Tests of Building Materials - 403.1

Urban Planning and Development

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

11.

Accession number: 20134016793011

Title: Exploration of a new-type grooved casing treatment configuration for a high-speed small-size centrifugal compressor

Authors: Xi, G.1 ; Ma, Y.1 ; Wu, G.-K.2 ; Zhang, K.-Y.1 ; Xiao, W.1 ; Mou, Z.-J.1/习岗;;;

Author affiliation: 1 School of Energy and Power Engineering, Xi'an Jiaotong University, Xi'an, Shaanxi Province, China

2 Institute of Water Resources and Hydro-electric Engineering, Xi'an University of Technology, Xi'an, China

Corresponding author: Xi, G. (xiguang@mail.xjtu.edu.cn)

Source title: Proceedings of the Institution of Mechanical Engineers, Part A: Journal of Power and Energy

Abbreviated source title: Proc. Inst. Mech. Eng. Part A J. Power Eng.

Volume: 227

Issue: 4

Issue date: June 2013

Publication year: 2013

Pages: 464-478

Language: English

ISSN: 09576509

E-ISSN: 20412967

CODEN: PPENET

Document type: Journal article (JA)

Publisher: SAGE Publications Ltd, 55 City Road, London, EC1Y 1SP, United Kingdom

Abstract: The main design target for a casing treatment device is to increase the stall margin of a given compressor without sacrificing efficiency. In this article, numerical and experimental

investigations about a new-type grooved casing treatment configuration are presented for a high-speed small-size centrifugal compressor. Different from traditional grooved casing treatments, in which the grooves are always placed over the rotor (for both axial and radial compressors), one or several circumferential casing grooves are placed along the shroud side of the diffuser passage in this configuration, to enhance the stall margin of the compressor. Computational fluid dynamics analysis is performed under stage environment in order to find the optimum location of the circumferential casing groove for the subsequent experiments in consideration of stall margin enhancement and peak efficiency gain, and the impact of groove number to the effect of this new-type grooved casing treatment configuration in enhancing the stall margin of the compressor stage is studied. It is found that stall margin gain due to the existence of circumferential casing grooves arises from the suction-reinjection effect of the low momentum fluid and its transportation along the circumferential and streamwise directions in the grooves and the grooves located at the middle and rear part of the diffuser casing wall have more pronounced effect in expanding the stall margin of the centrifugal compressor. In order to verify the effectiveness of this new-type grooved casing treatment configuration, the solid casing compressor and the compressors with circumferential casing grooves are tested in our test rig. The results indicate that this new-type grooved casing treatment configuration can obtain obvious improvement in the stall margin without sacrificing peak efficiency. Also, the numerical investigation is conducted for the entire compressor with circumferential casing grooves and the result is compared with the experimental data. © IMechE 2013.

Number of references: 27

Main heading: Centrifugal compressors

Controlled terms: Computational fluid dynamics

Uncontrolled terms: Casing treatment - Circumferential casing grooves - Computational fluid dynamics analysis - Experimental investigations - Numerical investigations - Radial compressors - Stage environments - Streamwise directions

Classification code: 618.1 Compressors - 921.6 Numerical Methods

DOI: 10.1177/0957650913477094

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

12.

Accession number: 20134016797463

Title: Identification of Hammerstein systems using key-term separation principle, auxiliary model and improved particle swarm optimisation algorithm

Authors: Xu, Xiaoping¹ ; Wang, Feng² ; Liu, Guangjun¹ ; Qian, Fucai³/徐小平;王峰;刘广钧;钱富才

Author affiliation: 1 School of Sciences, Xi'an University of Technology, Xi'an 710054, China

2 School of Mathematics and Statistics, Xi'an Jiaotong University, Xi'an 710049, China

3 School of Automation and Information Engineering, Xi'an University of Technology, Xi'an 710048, China

Corresponding author: Wang, F. (wangf@mail.xjtu.edu.cn)

Source title: IET Signal Processing

Abbreviated source title: IET Signal Proc.

Volume: 7

Issue: 8

Issue date: 2013

Publication year: 2013

Pages: 766-773

Language: English

ISSN: 17519675

E-ISSN: 17519683

Document type: Journal article (JA)

Publisher: Institution of Engineering and Technology, Six Hills Way, Stevenage, SG1 2AY, United Kingdom

Abstract: The dynamic behaviour of many systems can be approximated by a static non-linearity in series with a linear dynamic part. Systems with static input or output non-linearities are very common in many engineering applications. Such models are known as block-oriented models in the existing literature. The Hammerstein model is a special kind of block-oriented model, where a non-linear block is followed by a linear system. This study investigates the identification of Hammerstein systems with asymmetric two-segment piecewise-linear non-linearities. The basic idea is to employ a key-term separation technique and a corresponding auxiliary model initially. Then, the identification problem of non-linear system is changed into a nonlinear function optimisation problem over parameter space. Further, the estimates of all the parameters of the non-linear block, the linear subsystem and the noise part are obtained based on an improved particle swarm optimisation algorithm. Finally, simulation examples are included to demonstrate the effectiveness and robustness of the proposed identification scheme. © The Institution of Engineering and Technology 2013.

Number of references: 35

Main heading: Nonlinear systems

Controlled terms: Algorithms - Identification (control systems) - Linear systems - Models - Particle swarm optimization (PSO) - Piecewise linear techniques

Uncontrolled terms: Block-oriented models - Engineering applications - Identification problem - Identification scheme - Optimisation problems - Particle swarm optimisation algorithms - Separation principle - Separation techniques

Classification code: 723 Computer Software, Data Handling and Applications - 731.1 Control Systems - 902.1 Engineering Graphics - 921 Mathematics

DOI: 10.1049/iet-spr.2013.0042

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

13.

Accession number: 20133916791331

Title: A high strength Mg-6Zn-1Y-1Ce alloy prepared by hot extrusion

Authors: Yang, Wenpeng^{1, 2}; Guo, Xuefeng¹/杨文鹏;郭学峰

Author affiliation: 1 School of Materials Science and Engineering, Henan Polytechnic University, Jiaozuo 454003, China

2 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048,

China

Source title: Journal Wuhan University of Technology, Materials Science Edition

Abbreviated source title: J Wuhan Univ Technol Mater Sci Ed

Volume: 28

Issue: 2

Issue date: April 2013

Publication year: 2013

Pages: 389-395

Language: English

ISSN: 10002413

CODEN: JWUTE8

Document type: Journal article (JA)

Publisher: Wuhan Ligong Daxue, 122, Luoshi Road Wuhan Hubei, 430070, China

Abstract: Microstructures and tensile properties of Mg-6Zn-1Y-1 Ce alloy extruded in a temperature range between 300 °C and 400 °C were investigated. The yield strength of the material increased as the extrusion temperature decreased due to grain refinement. The yield strengths and grain sizes of extruded samples met Hall-Petch equation. The microstructure of the alloy extruded at 300 °C had a bimodal grain size distribution with an average grain size of 2.77 μm and showed a yield strength of 327 MPa with an elongation of 9%. The fine-grained microstructures were attributed to the dynamic recrystallization and the pinning effect of fine strengthening particles. © Wuhan University of Technology and SpringerVerlag Berlin Heidelberg 2013.

Number of references: 33

Main heading: Cesium alloys

Controlled terms: Cerium alloys - Crystal microstructure - Dynamic recrystallization - Extrusion - Grain refinement - Grain size and shape - Magnesium alloys - Tensile properties - Yield stress - Zinc

Uncontrolled terms: Average grain size - Bimodal grain-size distribution - Extrusion temperatures - Fine-grained microstructure - Hall-Petch equation - Pinning effects - Strengthening particles - Temperature range

Classification code: 951 Materials Science - 933.1.1 Crystal Lattice - 549.2 Alkaline Earth Metals - 549.1 Alkali Metals - 547.2 Rare Earth Metals - 546.3 Zinc and Alloys - 535.2.2 Metal Forming Practice - 531.2 Metallography - 531.1 Metallurgy - 422 Strength of Building Materials; Test Equipment and Methods - 421 Strength of Building Materials; Mechanical Properties

DOI: 10.1007/s11595-013-0701-x

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

14.

Accession number: 20134016805434

Title: An improved ant colony optimization algorithm for permutation flowshop scheduling to minimize makespan

Authors: Zhang, Zhiqiang¹ ; Jing, Zhang¹/张志强;张璟

Author affiliation: 1 Faculty of Computer Science and Engineering, Xi'an University of Technology, Xi'an, China

Source title: Parallel and Distributed Computing, Applications and Technologies, PDCAT Proceedings

Abbreviated source title: Parallel Distrib. Comput. Appl. Technol. PDCAT Proc.

Monograph title: Proceedings - 13th International Conference on Parallel and Distributed Computing, Applications, and Technologies, PDCAT 2012

Issue date: 2012

Publication year: 2012

Pages: 605-609

Article number: 6589346

Language: English

ISBN-13: 9780769548791

Document type: Conference article (CA)

Conference name: 13th International Conference on Parallel and Distributed Computing, Applications, and Technologies, PDCAT 2012

Conference date: December 14, 2012 - December 16, 2012

Conference location: Beijing, China

Conference code: 99675

Sponsor: Beijing Jiaotong University; IEEE Beijing Section; National Natural Science Foundation of China (NSFC)

Publisher: IEEE Computer Society, 2001 L Street N.W., Suite 700, Washington, DC 20036-4928, United States

Abstract: An improved Ant Colony Optimization (ACO) algorithm is put forward in this paper, with the aim of solving Permutation Flow shop Scheduling Problem (PFSP), which takes the minimum of make span as objective function. Also, we integrate NEH heuristic with ACO for scheduling problem cooperatively, define the heuristic information of ACO via make span increment, and come up with a new priority rule for PFSP. A local search procedure based on insertion neighborhood of PFSP is introduced into our algorithm to avoid a local optimum and to improve solution quality. Experiment results show that the proposed algorithm is effective and competitive. © 2012 IEEE.

Number of references: 20

Main heading: Artificial intelligence

Controlled terms: Ant colony optimization - Scheduling - Scheduling algorithms

Uncontrolled terms: Flow shop scheduling problem - Heuristic information - Improved ant colony optimization - Local search - Makespan - Objective functions - Permutation flow-shop scheduling - Scheduling problem

Classification code: 723 Computer Software, Data Handling and Applications - 723.4 Artificial Intelligence - 912.2 Management - 921 Mathematics - 921.5 Optimization Techniques

DOI: 10.1109/PDCAT.2012.48

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

20131017 新增 6 条

1.

Accession number: 20134016816383

Title: Design of SDH positive/zero/negative justification circuits based on FPGA

Authors: Cui, Zhou Juan1 ; Hu, Liao Lin1/;;

Author affiliation: 1 School of Mechanical Instrumental Engineering, Xi'an University of Technology, Xi'an, China

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 748

Monograph title: Material and Manufacturing Technology IV

Issue date: 2013

Publication year: 2013

Pages: 874-878

Language: English

ISSN: 10226680

ISBN-13: 9783037857526

Document type: Conference article (CA)

Conference name: 2013 4th International Conference on Material and Manufacturing Technology, ICMMT 2013

Conference date: May 11, 2013 - May 12, 2013

Conference location: Seoul, Korea, Republic of

Conference code: 99779

Sponsor: Motilal Nehru National Institute of Technology; University Politehnica of Bucharest

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: A successful design which used FPGA to do Positive/Zero/Negative Justification for adapting E1 (2.048Mbit/s) to SDH C-12 is presented. Gray code is adopted to realize the sampling of write pointer in reading clock domain and induct frequency doubling technology to deduct/insert reading clock, and a positioning counting device is set to complete the positioning insert of specified bytes. Asynchronous FIFO and Ping-Pong operation technique are both adopted. The design realizes stimulation, placement and routing under Quartus II 9.0 circumstances. It is a reusable hardware module which increases performance when compared to existing solutions. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Design

Controlled terms: Asynchronous sequential logic - Clocks - Field programmable gate arrays (FPGA) - Manufacture

Uncontrolled terms: Asynchronous FIFO - Clock domains - Counting device -

Frequency-doubling - Hardware modules - Placement and routing -

Positive/Zero/Negative Justification - SDH

Classification code: 408 Structural Design - 537.1 Heat Treatment Processes - 721.1

Computer Theory, Includes Formal Logic, Automata Theory, Switching Theory, Programming

Theory - 721.3 Computer Circuits - 943.3 Special Purpose Instruments

DOI: 10.4028/www.scientific.net/AMR.748.874

Database: Compendex

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2.

Accession number: 20134116828011

Title: Application of rock-wool in outer-wall external thermal insulation system

Authors: Guo, Jiao Long¹ ; Du, Qiang¹ ; Lu, Lu^{2/;;}

Author affiliation: 1 School of Civil Engineering, Chang'an University, Xi'an 710061, China

2 School of Civil Architecture, Xi'an University of Technology, Xi'an 710054, China

Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 753-755

Monograph title: Materials Processing and Manufacturing III

Issue date: 2013

Publication year: 2013

Pages: 512-515

Language: English

ISSN: 10226680

ISBN-13: 9783037857649

Document type: Conference article (CA)

Conference name: 3rd International Conference on Advanced Engineering Materials and Technology, AEMT 2013

Conference date: May 11, 2013 - May 12, 2013

Conference location: Zhangjiajie, China

Conference code: 99781

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: The paper takes into full account of the convenience and safety of outer-wall external thermal insulation system, and investigates the technical parameters of rock-wool. The study provides two kinds of construction methods for the system which are rendering and anchoring. In general, galvanizing steel-meshwork using machine anchors could use all kinds of rock-wool panel made in China. The interface mortar used for rock-wool could protect workers' hands and improve the integrity and anti-crackness of the system. Both of these two kinds of rock-wool systems could resolve the difficulties of current rock-wool panel application in outer-wall external thermal insulation system. The rock-wool external thermal insulation which has sufficient fire-proof capability could apply in many kinds of buildings, especially high-rise buildings. © (2013) Trans Tech Publications, Switzerland.

Number of references: 9

Main heading: Rocks

Controlled terms: Tall buildings - Walls (structural partitions) - Wool - Yarn

Uncontrolled terms: Construction method - External thermal insulation systems -

External thermal insulations - High rise building - Made in China - Rock-wool - Workers'

Classification code: 402 Buildings and Towers - 481.1 Geology - 819.1 Natural Fibers - 819.4 Fiber Products

DOI: 10.4028/www.scientific.net/AMR.753-755.512

Database: Compendex

Compilation and indexing terms, © 2013 Elsevier Inc.

3.

Accession number: 20134116827528

Title: Research advancement of porous fiber metals

Authors: Liu, Shi Feng^{1, 2} ; Ge, Xiao Chen¹ ; Tang, Hui Ping² ; Yang, Xin³;;;

Author affiliation: 1 Xian University of Architecture and Technology, Xi'an, 710055, Shaanxi, China

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Source title: Advanced Materials Research

Abbreviated source title: Adv. Mater. Res.

Volume: 750-752

Monograph title: Advanced Engineering Materials III

Issue date: 2013

Publication year: 2013

Pages: 569-579

Language: English

ISSN: 10226680

ISBN-13: 9783037857632

Document type: Conference article (CA)

Conference name: 3rd International Conference on Advanced Engineering Materials and Technology, AEMT 2013

Conference date: May 11, 2013 - May 12, 2013

Conference location: Zhangjiajie, China

Conference code: 99781

Publisher: Trans Tech Publications Ltd, Kreuzstrasse 10, Zurich-Durnten, CH-8635, Switzerland

Abstract: Porous fiber metals are a kind of metallic materials which have a through-pore structure by forming and sintering. They have the advantages of light weight, high surface area and high specific strength. They are widely used in engineering field. This paper described the progress and application of porous fiber metals. And analysed the progresses of titanium fiber porous materials, nickel fiber porous materials, FeCrAl fibrous porous materials, copper fiber porous materials and stainless steel fiber porous materials, and prospected their further development. © (2013) Trans Tech Publications, Switzerland.

Number of references: 24

Main heading: Fibers

Controlled terms: Applications - Porous materials

Uncontrolled terms: Copper fibers - FeCrAl - High surface area - Light weight - Metallic material - Nickel fiber - Porous fibers - Preparation

Classification code: 451.2 Air Pollution Control - 812 Ceramics, Refractories and Glass -
817 Plastics and Other Polymers: Products and Applications - 951 Materials Science
DOI: 10.4028/www.scientific.net/AMR.750-752.569
Database: Compendex
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4.

Accession number: 20134016819422

Title: Optimization and characterization of liginosulfonate biodegradation process by a bacterial strain, *Sphingobacterium* sp. HY-H

Authors: Wang, Dongqi^{1, 2}; Lin, Yishan³; Du, Wenjing¹; Liang, Jidong¹; Ning, Youfeng²;;;

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Source title: International Biodeterioration and Biodegradation

Abbreviated source title: Int. Biodeterior. Biodegrad.

Volume: 85

Issue date: November 2013

Publication year: 2013

Pages: 365-371

Language: English

ISSN: 09648305

CODEN: IBBIES

Document type: Journal article (JA)

Publisher: Elsevier Ltd, Langford Lane, Kidlington, Oxford, OX5 1GB, United Kingdom

Abstract: The objective of this study was to investigate the optimization and pathways of liginosulfonate biodegradation by a newly isolated lignin-degrading bacterial strain, *Sphingobacterium* sp. HY-H. The optimal conditions for liginosulfonate degradation capability were determined by Taguchi's orthogonal matrix method to be: initial pH, 7.0; temperature, 30°C; and a liginosulfonate/nitrogen (as NH₄Cl) mass ratio of 5. Under optimal conditions, the maximum liginosulfonate degradation capacity of strain HY-H was 31%. In order to characterize the changes in residual liginosulfonate and the metabolic products, FTIR spectra, functional groups, and elemental and GC-MS analysis were introduced. An examination of the data suggests a possible route of liginosulfonate degradation by strain HY-H was that liginosulfonate was first depolymerized to low-molecular-weight compounds; then the side chains of liginosulfonate were partially oxidized and further decarboxylated to produce carbon dioxide. If properly optimized and controlled, strain HY-H may play a role in the treatment of pulp and paper wastewater containing a high concentration of liginosulfonate, as well as in the lignocellulose breakdown for biofuel and chemicals production. © 2013 Elsevier Ltd.

Number of references: 56

Main heading: Biodegradation

Controlled terms: Carbon dioxide - Fourier transform infrared spectroscopy - Functional groups - Lignin - Matrix algebra - Metabolism - Microbiology - Optimization

Uncontrolled terms: Bacterial degradation - Lignosulfonates - Metabolic products - Sphingobacterium sp - Taguchi's orthogonal arrays

Classification code: 921.5 Optimization Techniques - 921.1 Algebra - 815.1.1 Organic Polymers - 804.2 Inorganic Compounds - 804.1 Organic Compounds - 801.2 Biochemistry - 801 Chemistry

DOI: 10.1016/j.ibiod.2013.06.032

Database: Compendex

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5.

Accession number: 20134016814001

Title: Roles of oxygen vacancy on ferromagnetism in Ni doped In₂O₃: A hybrid functional study

Authors: Wang, V.1 ; You, C.-Y.2 ; He, H.-P.3 ; Ma, D.-M.1 ; Mizuseki, H.4 ; Kawazoe, Y.4/王伟;游才印;;;

Author affiliation: 1 Department of Applied Physics, Xi'an University of Technology, Xi'an 710054, China

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Corresponding author: Wang, V. (wangvei@icloud.com)

Source title: Journal of Magnetism and Magnetic Materials

Abbreviated source title: J Magn Magn Mater

Volume: 348

Issue date: 2013

Publication year: 2013

Pages: 55-60

Language: English

ISSN: 03048853

CODEN: JMMMDC

Document type: Journal article (JA)

Publisher: Elsevier, P.O. Box 211, Amsterdam, 1000 AE, Netherlands

Abstract: The roles of oxygen vacancies on the electronic and magnetic properties of Ni doped In₂O₃ have been studied by first-principles calculations based on hybrid functional theory. Our results predict that the Ni-doped In₂O₃ system displays a ferromagnetic semiconducting character. However, the presence of oxygen vacancies results in antiferromagnetic coupling between the neighboring Ni pair bridged by an oxygen vacancy. The antiferromagnetic coupling is found to arise from the predominant role of superexchange due to the strong Ni 3d-O 2p hybridization. Consequently, the oxygen vacancies play a key role in the lower saturation magnetization of Ni:In₂O₃ polycrystalline sample, as observed in experiments. © 2013 Elsevier

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Number of references: 66

Main heading: Nickel

Controlled terms: Antiferroelectricity - Calculations - Doping (additives) -

Ferromagnetism - Oxygen vacancies

Uncontrolled terms: Antiferromagnetic coupling - Electronic and magnetic properties -

First-principles calculation - Hybrid density functional theory - Hybrid functional theory

- Indium oxide - Nickel dopants - Polycrystalline samples

Classification code: 801 Chemistry - 723 Computer Software, Data Handling and

Applications - 721 Computer Circuits and Logic Elements - 921 Mathematics - 701.2

Magnetism: Basic Concepts and Phenomena - 548.1 Nickel - 482 Mineralogy - 701.1

Electricity: Basic Concepts and Phenomena

DOI: 10.1016/j.jmmm.2013.08.001

Database: Compendex

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6.

Accession number: 20134116826243

Title: Coercivity enhancement of Nd₂Fe₁₄B/ α -Fe nanocomposite magnets through neodymium diffusion under annealing

Authors: Wang, Yupu¹ ; You, Caiyin^{1, 2} ; Wang, Junwei¹ ; Tian, Na¹ ; Lu, Zhengxin¹ ; Ge, Liling¹ / 王玉璞;游才印;王军伟;田娜;卢正欣;葛利玲

Author affiliation: 1 School of Materials Science and Engineering, Xi'an University of Technology, Xi'an 710048, China

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Corresponding author: You, C. (caiyinyou@xaut.edu.cn)

Source title: Journal of Rare Earths

Abbreviated source title: J Rare Earth

Volume: 30

Issue: 8

Issue date: August 2012

Publication year: 2012

Pages: 757-760

Language: English

ISSN: 10020721

CODEN: JREAE6

Document type: Journal article (JA)

Publisher: Chinese Rare Earth Society, 2 Xijiekouwai Dajie, Beijing, 100088, China

Abstract: The coercivity enhancement of ball-milled Nd₂Fe₁₄B/ α -Fe nanocomposite magnets was investigated. It was found that the coercivity could be enhanced through mixing a small amount of Nd powder with as-milled Fe-rich Nd-Fe-B powders. The annealed samples were investigated by means of X-ray diffraction, scanning electron microscopy and magnetic measurement systems. Under annealing, some of Nd powders promoted the formation of hard

magnetic phase Nd₂Fe₁₄B. On the other hand, a few of Nd would diffuse into the interface of Nd₂Fe₁₄B/ α -Fe nanocomposite to compensate for the loss of the interfacial magnetic anisotropy. These two features are all beneficial to the coercivity.

Number of references: 15

Main heading: Coercive force

Controlled terms: Annealing - Microstructure - Nanocomposites - Powders - Rare earths - Scanning electron microscopy - X ray diffraction

Uncontrolled terms: Annealed samples - Ball-milled - Coercivity enhancement - Hard magnetic phase - Interfacial magnetic anisotropies - Nanocomposite magnets - Nd-Fe-B powder

Classification code: 933.1.1 Crystal Lattice - 933 Solid State Physics - 804.2 Inorganic Compounds - 804 Chemical Products Generally - 951 Materials Science - 761

Nanotechnology - 701.2 Magnetism: Basic Concepts and Phenomena - 537.1 Heat Treatment Processes - 536 Powder Metallurgy - 741.1 Light/Optics

DOI: 10.1016/S1002-0721(12)60125-2

Database: Compendex